WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
OREGON

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF
JAN. 1, 1965

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Soil Conservation Service, 511 N.W. Broadway - Room 507, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
Western United States	Monthly (Feb.-May)	Portland, Oregon	All Cooperators
Basic Data Summary	October 1	Portland, Oregon	All Cooperators
STATES			
Alaska	Monthly (Mar.-May)	Palmer, Alaska	Alaska S.C.D.
Arizona	Semi-Monthly (Jan. 15 - Apr. 1)	Phoenix, Arizona	Salt R. Valley Water Users Assoc. Ariz. Agr. Exp. Station
Colorado and New Mexico	Monthly (Feb.-May)	Fort Collins, Colorado	Colo. State University Colo. State Engineer N. Mex. State Engineer
Idaho	Monthly (Jan.-June)	Boise, Idaho	Idaho State Reclamation Engineer
Montana	Monthly (Jan.-June)	Bozeman, Montana	Mont. Agr. Exp. Station
Nevada	Monthly (Jan.-May)	Reno, Nevada	Nevada Dept. of Conservation and Natural Resources Division of Water Resources
Oregon	Monthly (Jan.-June)	Portland, Oregon	Oreg. State University Oregon State Engineer
Utah	Monthly (Jan.-June)	Salt Lake City, Utah	Utah State Engineer
Washington	Monthly (Feb.-June)	Spokane, Washington	Wn. State Dept. of Conservation
Wyoming	Monthly (Feb.-June)	Casper, Wyoming	Wyoming State Engineer

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
British Columbia	Monthly (Feb.-June)	Water Resources Service, Dept. of Lands, Forest and Water Resources, Parliament Blog., Victoria, B.C., Canada
California	Monthly (Feb.-May)	Calif. Dept. of Water Resources, P.O. Box 388, Sacramento, Calif.

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WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
OREGON

ISSUED

JANUARY 8, 1965

Report prepared by

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and

BOB L. WHALEY, Assistant Snow Survey Supervisor

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CHRIS L. WHEELER
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STATE OF OREGON

WATER SUPPLY OUTLOOK for OREGON

JANUARY 1, 1965

Chances are good for above average water supplies in 1965. Snow surveys at selected key snow courses in Oregon's mountain watersheds reveal water contents substantially above average for this early-winter date. Moisture in the soil mantle of all watersheds is considerably above average as a result of recent record-breaking rains and heavy snowmelt. Reservoired water supplies increased rapidly during December and are well above average with many reservoirs now spilling to make space for flows yet to come.

SNOW COVER

The mountain snowpack has recovered all the water lost by recent heavy snowmelt and is now well above average for this date. Heaviest snow cover lies on the Powder, Grande Ronde, Walla Walla, Umatilla, John Day, Deschutes, Willamette and Silvies River watersheds.

SOIL MOISTURE

The soil-mantle under the snowpack is exceptionally wet for this time of the year. These wet soils will greatly favor runoff from melting snows next spring in all parts of the state.

RESERVOIR STORAGE

Water stored in 25 Oregon reservoirs totals 197 percent of the 15 year average (1948-62) for January 1 and 235 percent of last year at this date. Many reservoirs are spilling to make room for runoff yet to come next spring.

STREAMFLOW

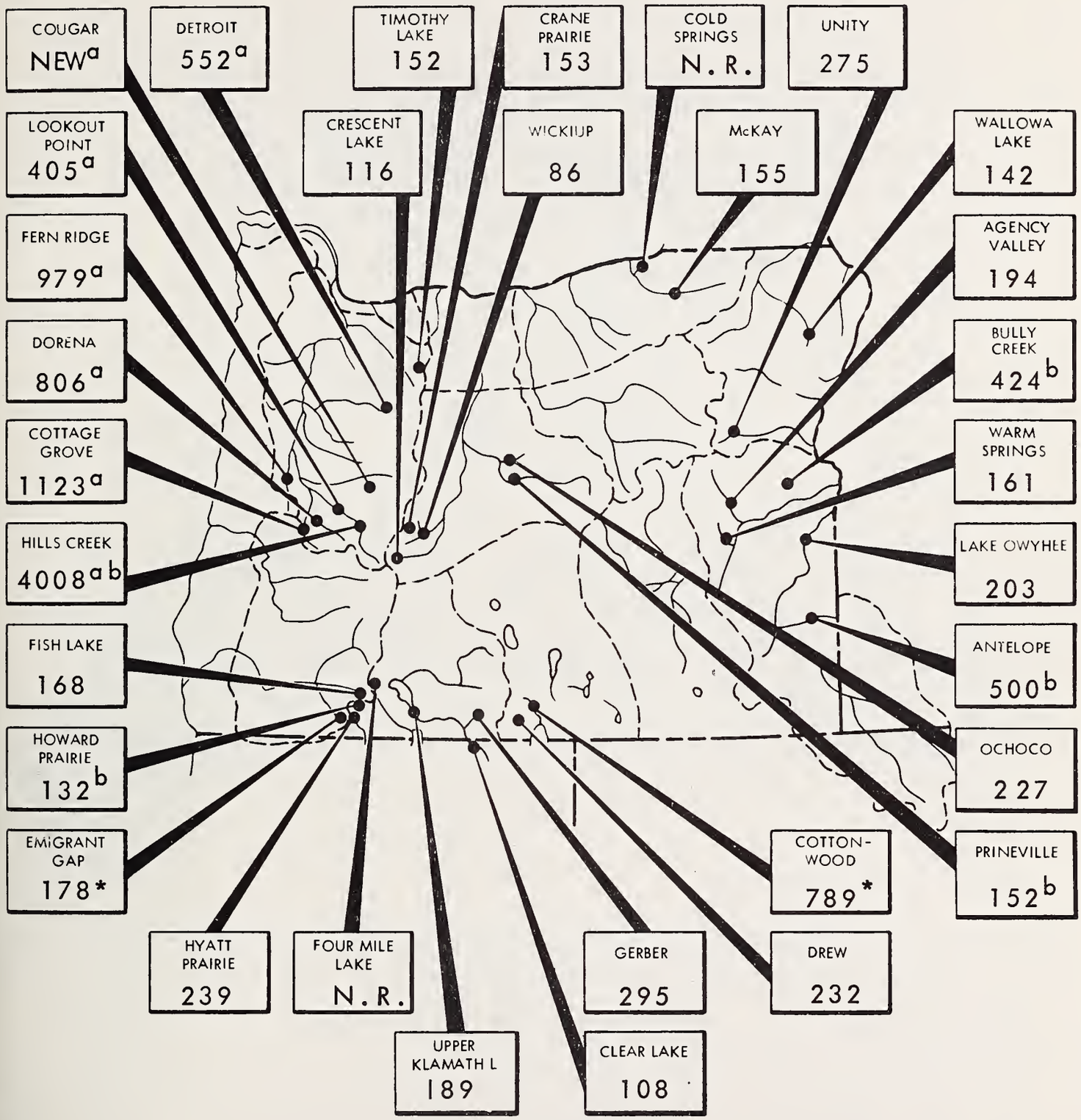
Flow of Oregon streams next spring and summer is expected to range from average to much above average if normal conditions of temperature and precipitation occur during the balance of the winter and runoff season.

Preliminary figures of streamflow* on key Oregon streams for the period October 1, 1964 to January 1, 1965 are all above normal and vary from lows of 116 percent on the Deschutes and 174 percent for Upper Klamath Lake up to highs of 299 percent for the John Day and 413 percent for inflow to Owyhee Lake.

* Preliminary data from U. S. Geological Survey, Portland; Oregon State Engineer, Salem; U. S. Bureau of Reclamation, Klamath Falls and Pacific Power and Light Company, Medford.

STORAGE STATUS of OREGON RESERVOIRS
as percent of 1948-62, 15 year average

JANUARY 1, 1965



(a) Multiple purpose reservoir - space reserved primarily for flood runoff.

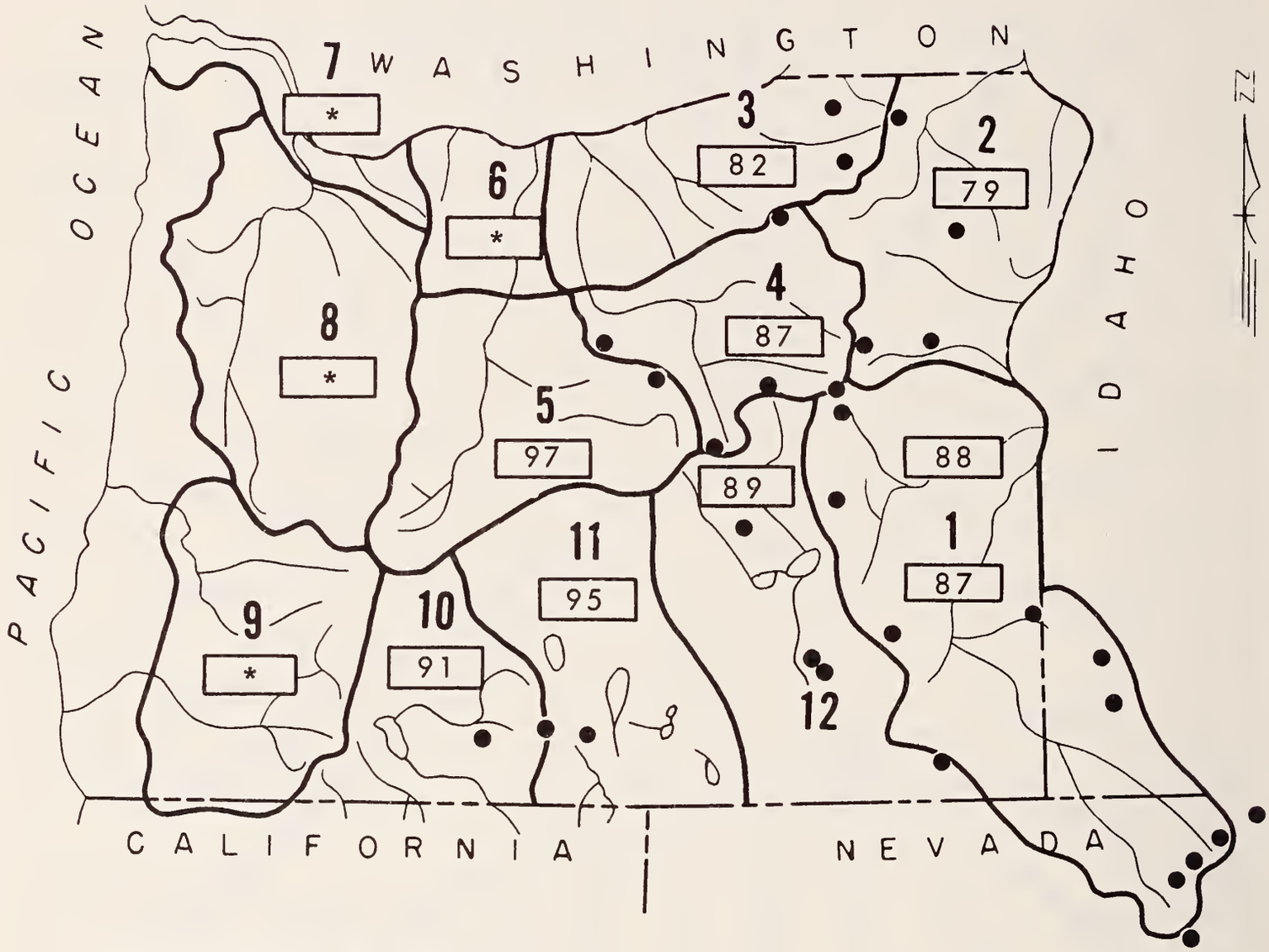
(b) Percent of last year on this date due to lack of record.

N.R. - *No report.*

* *Using % average for years of record after reconstruction.*

MOUNTAIN SOIL MOISTURE in OREGON
as percent of capacity

JANUARY 1, 1965



● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON [a]

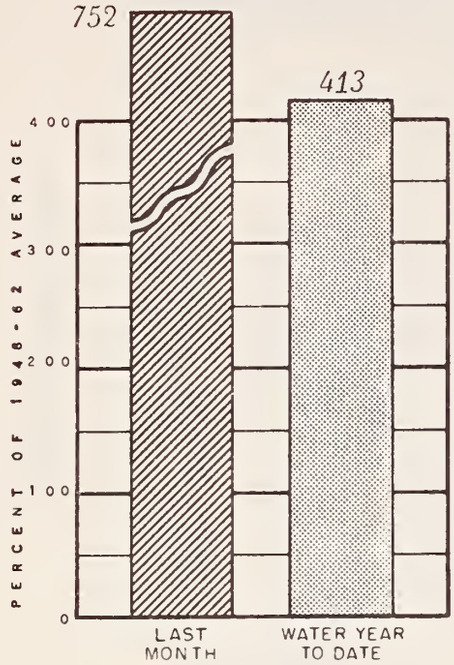
JANUARY 1, 1965

PRECIPITATION as PERCENT of the 1948-62 AVERAGE					
STATION	LAST MONTH	WATER YEAR TO DATE [b]	STATION	LAST MONTH	WATER YEAR TO DATE [b]
Baker Apt.	337	146	Lakeview	455	258
Bend	494	242	Medford Apt.	385	219
Burns	347	218	Nyssa	235	159
Enterprise	402	164	Pendleton Apt.	214	144
Eugene Apt.	303	190	Portland Apt.	176	119
Heppner	301	161	Salem Apt.	192	132
John Day	210	151	The Dalles	379	219
Klamath Falls Apt.	354	209	Owyhee (Nev.)	205	180

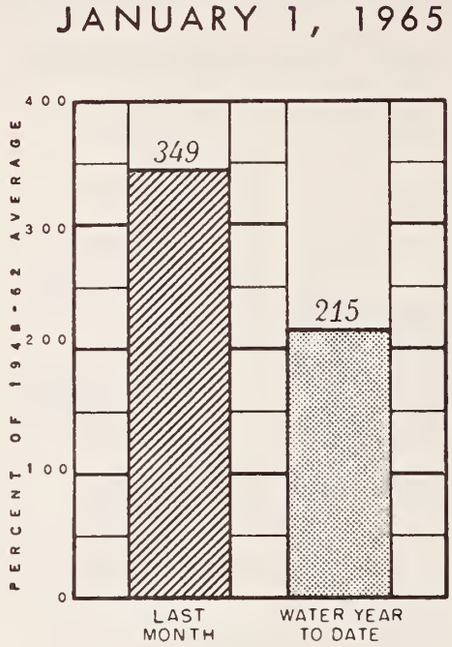
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

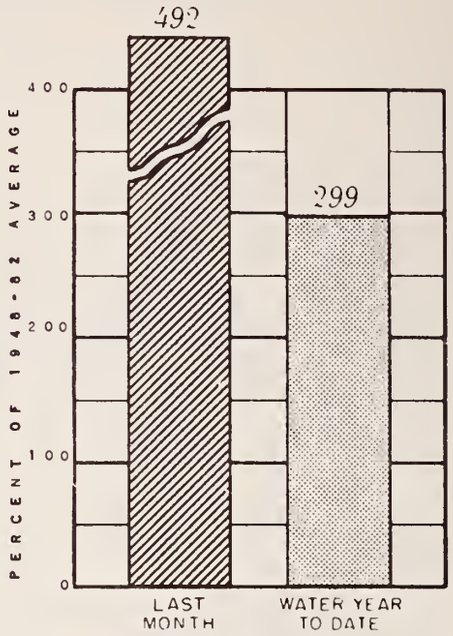
JANUARY 1, 1965



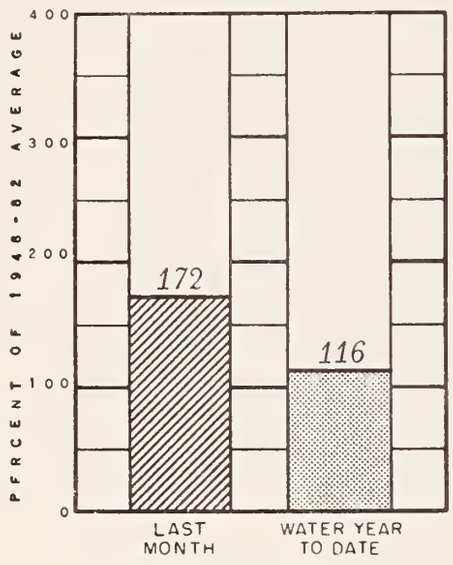
Owyhee Lake net inflow



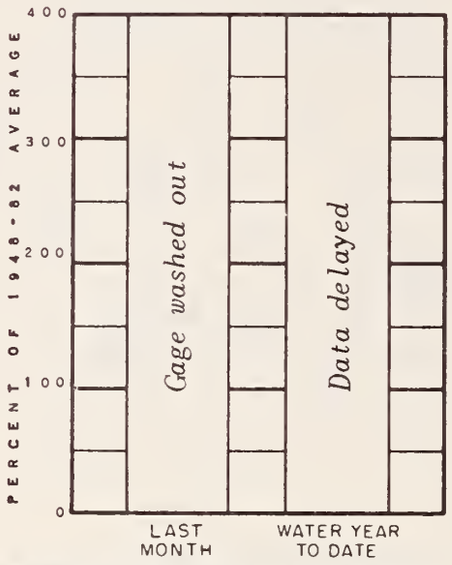
Umatilla near Umatilla



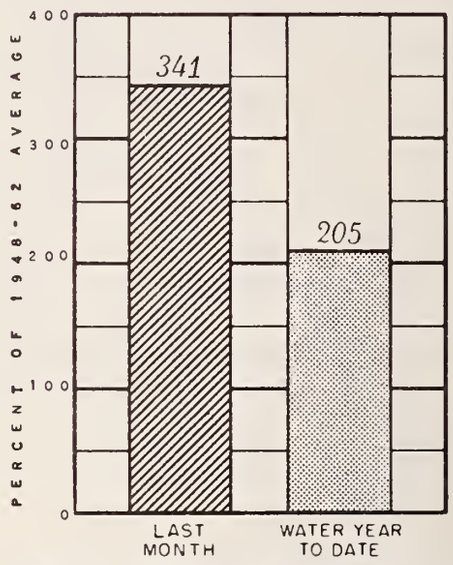
John Day at Service Creek



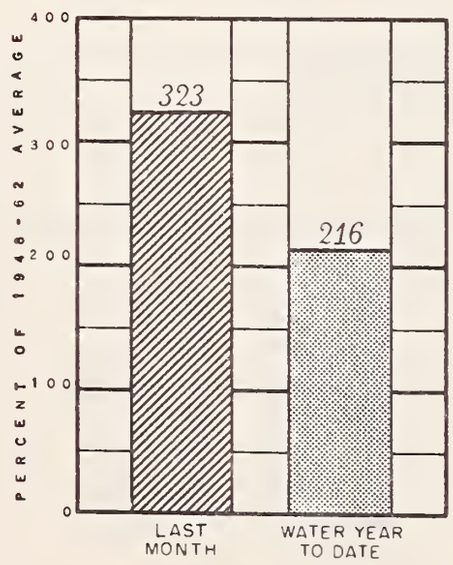
Deschutes at Moody



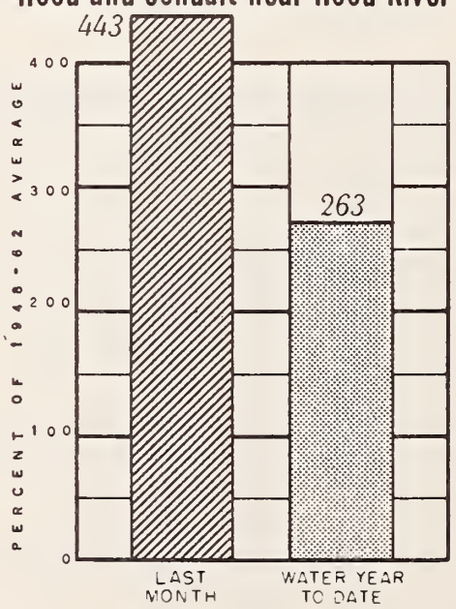
Hood and conduit near Hood River



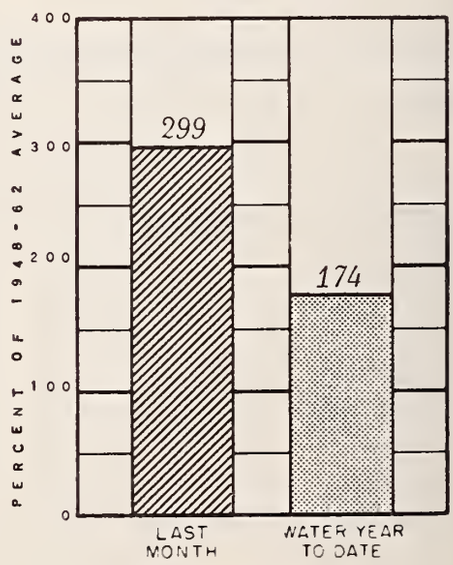
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK - A good to excellent water supply is in prospect for the 1965 irrigation season in Malheur county. Snow cover is better than average and watershed soils are well primed. Reservoir storage is very good after record December streamflow.

SNOW COVER - Snow cover has rebuilt after the December melt and water content of the snowpack on the Owyhee is 127 percent of the 1948-62 average for January 1 and 147 percent of last year at this time.

Water content of the snowpack on the Malheur is 112 percent of the 1948-62 average and 152 percent of last year on January 1.

SOIL MOISTURE - Watershed soils are primed to near capacity as a result of the late December snowmelt and rains. Some of the measurements taken just prior to the Christmas thaw indicate only 2/3 to 3/4 of capacity, while those after the thaw show 97 to 100 percent of capacity. The Owyhee-Malheur area as a whole averages 90 percent of capacity including the earlier measurements before the melt.

RESERVOIR STORAGE - Owyhee Reservoir contained 643,500 acre feet on January 1. This is 203 percent of the 1948-62 average and 242 percent of last year's January 1 storage and will provide an excellent water supply for the Owyhee Project in 1965.

Warmsprings Reservoir held 71,800 acre feet on January 1, compared with 50,000 last year and a 15 year average of 44,700 acre feet. Agency Valley Reservoir held 33,600 acre feet on January 1 and last year held only 19,000. The January 1 average for 1948-62 period is 17,300 acre feet. Bully Creek Reservoir held 21,200 acre feet on January 1 and last year held only 5,000.

Total water stored in Malheur River reservoirs is 126,600 acre feet. This is well above average for January 1 and should be a good start towards an average 1965 irrigation supply for Vale-Oregon and Malheur Irrigation Districts.

Antelope Reservoir contained 14,000 acre feet on January 1. Last year it held only 2,800 acre feet at this time. Some problems with snow causing breaks in the feed canal were reported but storage is well ahead of average and Jordan Valley Irrigation District should have a good water supply in 1965.

STREAMFLOW - December inflow into Lake Owyhee was 182,000 acre feet, the highest of record. This was better than 7 times the 15 year average (1948-62).

Inflow into Warmsprings, Agency Valley and Bully Creek reservoirs totaled about 90,000 acre feet. This was also the highest December inflow of record for these reservoirs.

Streamflow has receded again on Malheur county streams but with the watershed soils near capacity and snowpack rebuilding, it could very easily rise again to higher than average flows in the next few weeks if warm weather or rain occurs.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek Bully Creek Cow Creek Jordan Creek Jordan Valley Irrig. Dist. McDermitt Creek Oregon Canyon Creek Owyhee Project Succor Creek Tenmile Creek Vale Oregon Irrig. Dist. Warmsprings Irrig. Dist. Willow Creek (Reservoired)	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Agency Valley	60.0	33.6	19.0	17.3
Antelope	55.0	14.0	2.8	- -
Bully Creek	31.0	21.2	5.0	- -
Owyhee	715.0	643.5	266.7	316.5
Warmsprings	191.0	71.8	50.0	44.7

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
2140	Malheur near Drewsey	c	Feb.-July	122	
			April-Sept.	82	
2175	Malheur, North Fork at Beulah[d]	c	April-Sept.	65	
1825	Owyhee Reservoir net Inflow[k]	c	Feb.-July		
			April-Sept.		

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bear Creek (Nev.)	7800	72	16.8	11-10-64	11.4[f]	9.6[f]	- -
Big Bend (Nev.)	6700	48	16.7	12-28-64	16.2	15.6[f]	14.7
Blue Mountain Springs	5900	42	16.9	1-4-65	13.1	7.2	12.3
Crane Prairie	5375	48	18.2	1-4-65	16.0	14.3	16.5
Folly Farm	4450	30	12.5	12-16-64	8.2	8.3	9.0
Jack Creek, Lower (Nev.)	6800	48	8.6	b			
Jordan Valley	4250	48	19.3	12-16-64	14.7	14.6	14.9
Mud Flat (Ida.)	5500	48	12.8	b			
Rodeo Flat (Nev.)	6800	42	11.0	12-28-64	11.0	10.4	10.6
Stinking Water Summit	4800	48	21.9	12-17-64	21.3	20.8	21.0
Taylor Canyon (Nev.)	6200	48	15.1	12-29-64	15.0	12.6[f]	11.6[f]
Triangle (Ida.)	5150	48	16.6	b			

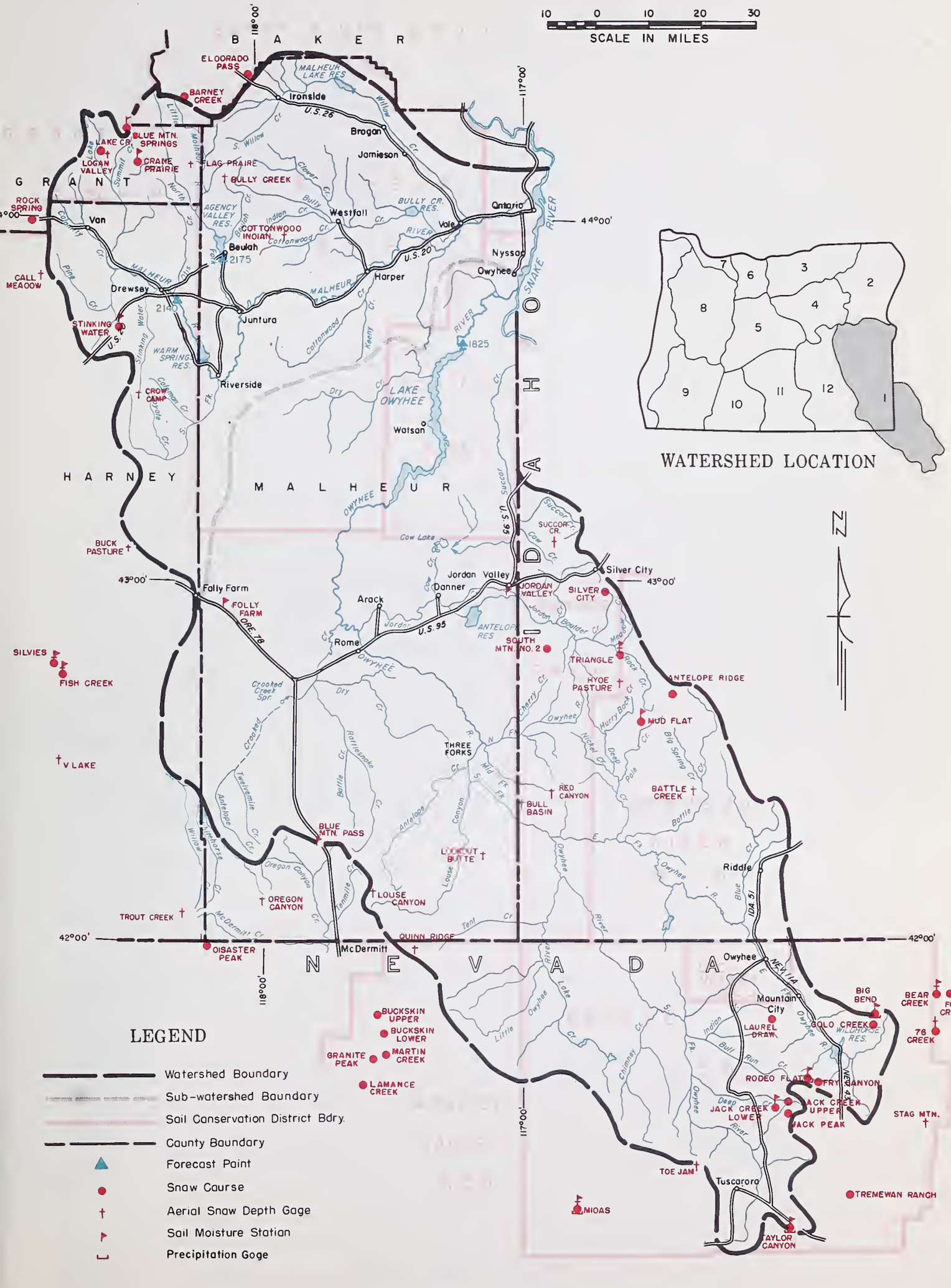
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Antelope Ridge (Ida.)	5900	c				
Barney Creek	5950	c				
Battle Creek[e] (Ida.)	5700	c				
Bear Creek[e] (Nev.)	7800	1/4	35	8.8	4.5	7.3[h]
Big Bend (Nev.)	6700	12/28	22	4.5	2.7	3.5[h]
Blue Mountain Springs	5900	12/28	40	11.6	3.6	6.0[h]
Buck Pasture[e]	5700	c				
Buckskin, Lower (Nev.)	6700	c				
Buckskin, Upper (Nev.)	7200	c				

continued

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Bull Basin [e] (Ida.)	5600	[c]				
Bully Creek [e]	5300	[c]				
Call Meadow [e]	5340	[c]				
Columbia Basin [e] (Nev.)	6650	[c]				
Cottonwood-Indian [e]	4320	[c]				
Crane Prairie	5375	[c]				
Crow Camp [e]	5500	[c]				
Disaster Peak (Nev.)	6500	[c]				
Eldorado Pass	4600	12/29	6	0.6	4.0	1.2[h]
Fawn Creek [e] (Nev.)	7000	[c]				
Fish Creek	7900	[c]				
Flag Prairie [e]	4750	[c]				
Fox Creek (Nev.)	6800	[c]				
Fry Canyon (Nev.)	6700	12/28	17	2.5	2.0	3.1[h]
Gold Creek (Nev.)	6600	12/28	14	2.1	2.4	2.2[h]
Granite Peak (Nev.)	7800	[c]				
Hyde Pasture [e] (Ida.)	5800	[c]				
Jack Creek, Lower (Nev.)	6800	[c]				
Jack Creek, Upper (Nev.)	7250	[c]				
Jacks Peak	8420	[c]				
Lake Creek	5120	Not surveyed				
Logan Valley [e]	5100	[c]				
Lookout Butte [e]	5650	[c]				
Louse Canyon [e]	6440	[c]				
Martin Creek (Nev.)	6700	[c]				
Midas (Nev.)	7200	[c]				
Mud Flat (Ida.)	5500	[c]				
Oregon Canyon [e]	6950	[c]				
Quinn Ridge [e] (Nev.)	6300	[c]				
Red Canyon [e] (Ida.)	6500	[c]				
Rock Spring	5100	12/29	9	2.2	1.3	2.1[h]
Rodeo Flat (Nev.)	6800	12/28	13	1.9	2.1	3.4[h]
76 Creek [e] (Nev.)	7100	1/4	26	6.5	- -	- -
Silver City (Ida.)	6400	Not surveyed				
Silvies	6900	[c]				
South Mountain #2 (Ida.)	6340	12/28	27	8.3	3.2	4.5[h]
Stag Mountain [e] (Nev.)	7800	[c]				
Stinking Water	4800	12/28	T	T	0.9	2.0[h]
Succor Creek (Ida.)	6100	[c]				
Taylor Canyon (Nev.)	6200	12/29	9	1.1	1.2	1.8[h]
Toe Jam [e] (Nev.)	7700	[c]				
Tremewan Ranch (Nev.)	5700	12/29	T	T	0.9	0.4[h]
Triangle [e] (Ida.)	5150	[c]				
Trout Creek [e]	7800	[c]				
"V" Lake [e]	6600	[c]				

"The Conservation of Water begins with the Snow Survey"

Area 2

WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of
JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook in Baker, Union and Wallowa counties is good as of this early winter date.

Snow cover is above average and watershed soils are fairly well-primed by heavy precipitation and snowmelt.

Reservoirs hold well above average January 1 storage and should have little trouble filling before the irrigation season.

SNOW COVER

Water content of the snowpack on Burnt River watershed is 128 percent of the 1948-62 January 1 average and 147 percent of last year at this time.

Powder River snowpack is 169 percent of average and 233 percent of last year.

The Grand Ronde snowpack has 139 percent of its' average January 1 water content and about twice as much as last year.

SOIL MOISTURE

Watershed soils gained much needed moisture from heavy December rains and snowmelt at lower elevations. Measurements indicate soils are primed to about 79% of total capacity, a little better than last year, but drier than two years ago.

RESERVOIR STORAGE

Unity Reservoir contained 14,300 acre feet on January 1 after a record December inflow. This is almost 3 times the average January 1 storage for the 1948-62 period and better than twice the storage last year at this time.

Wallowa Lake held 24,500 acre feet or 142 percent of the January 1 average and 17 percent better than last year at this time.

STREAMFLOW

Flow of streams in this area has been near average until late in December, when rains combined with low elevation snowmelt to produce record or near record flows on many streams.

The inflow to Unity Reservoir was reported as the "largest on record for December."

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope Baker Valley Big Creek Clover Cr. (Nr. N. Powder) Cove Durkee Eagle Valley Elgin Enterprise-Joseph Hereford-Bridgeport Imnaha River LaGrande-Island City Lostine-Wallowa No. Powder River-Wolf Cr. Pine Valley Powder River-Elk Creek Summerville Sumpter Valley Union-Hot Lake Unity	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Unity	25.2	14.3	6.3	5.2
Wallowa Lake	37.5	24.5	20.9	17.2

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3305	Bear near Wallowa	c	April-Sept.	72	
2730	Burnt near Hereford[d]	c	Feb.-June	53	
			April-Sept.	41	
3200	Catherine near Union	c	April-Sept.	73	
3190	Grande Ronde at LaGrande	c	March-Sept.	246	
			April-Sept.	203	
3295	Hurricane near Joseph	c	April-Sept.	48	
2920	Imnaha at Imnaha	c	April-Sept.	318	
3300	Lostine near Lostine	c	April-Sept.	131	
2755	Powder near Baker	c	April-July	66	
			April-Sept.	67	
3250	Wallowa, East Fork near Joseph[d]	c	April-July	9.7	
			April-Sept.	12.0	

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Summit	5100	36	16.8	12-30-64	11.6	9.3	11.9
Emigrant Springs	3925	48	22.3	12-21-64	18.5	18.6	19.9
Tollgate	5070	48	23.6	12-29-64	19.3	19.0	21.3

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Aneroid Lake #1	7480	c				
Aneroid Lake #2	7000	c				
Anthony Lake	7125	12/28	72	21.1	8.5	11.9
Bald Mountain [e] (Ore.)	6700	c				
Barney Creek	5950	c				
Beaver Reservoir	5340	12/26	23	6.6	3.1	4.8 [h]
Big Sheep [e]	6200	c				
Blue Mountain Summit	5098	12/30	19	4.8	1.5	3.5
Bourne	5800	c				
Clover Creek	4100	c				
County Line	4800	12/30	15	3.1	1.2	2.9 [h]
Dooley Mountain	5430	12/28	20	5.5	2.9	3.5
Eilertson Meadows	5400	12/28	31	7.9	3.1	5.0 [h]
Eldorado Pass	4600	12/29	6	0.6	4.0	1.2 [h]
Gold Center	5340	c				
Goodrich Lake	6775	c				
Little Alps	6200	12/28	37	8.9	4.1	- -
Lucky Strike	5050	c				
Meacham	4300	12/21	25	5.3	1.7	3.3 [h]
Mirror Lake [e]	8200	c				
Moss Spring	5850	12/29	48	13.1	6.6	10.7
Schneider Meadows	5400	c				
Schoolmarm	4775	12/30	12	1.8	1.1	2.6 [h]
Standley [e]	7400	c				
Taylor Green	5740	c				
Tipton	5100	12/30	27	5.9	3.0	4.9 [h]
Tollgate	5070	12/29	41	12.8	8.6	9.6 [h]
TV Ridge [e]	7000	c				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook for Umatilla, Morrow and Gilliam counties is good. Snow cover is better than average and about twice last year at this time. Soil moisture is near capacity and reservoir storage is good for this early in the season.

SNOW COVER

Water content of the snowpack on the Umatilla was 141 percent of average and about double last year at this time. These measurements were taken just prior to the Christmas week thaw, but recent reports indicate the snowpack has rebuilt to about this same level.

Snow surveys on the Walla Walla were made after the thaw and were 133 percent of average and about 170 percent of last year.

SOIL MOISTURE

Moisture in watershed soils averaged 82 percent of capacity as measured just prior to January 1. Reports indicate soils are much wetter now and should aid subsequent snowmelt.

RESERVOIR STORAGE

McKay Reservoir received record inflow of 27,116 acre feet in December bringing the January 1 storage up to 30,850 acre feet. This is 155 percent of the 1948-62 average and about 6 times the storage held last year at this time.

Cold Springs Reservoir has 22,200 acre feet or 106 percent of average, but a little less than last year at this time. Feed canal breaks have caused delay in filling the reservoir.

STREAMFLOW

Flow of the Umatilla near Umatilla* was low until December, when the Christmas week thaw boosted the month's flow to 3 1/2 times the 1948-62 average. Many streams of the area set new record high peak flows.

Spring and summer flows are expected to be average or above if normal precipitation and temperatures prevail during the remainder of the winter and runoff period.

* Preliminary data furnished by U. S. Geological Survey, Portland, Oregon.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Birch Creek Butter Creek Dry Creek Dugger Creek Johnson Creek McKay Creek Mill Creek Mud Creek Pine Creek Rhea Creek Rock Creek Umatilla R. (Cold Springs Reservoir) Umatilla River, Main Umatilla River (McKay Res.) Walla Walla River, Little Walla Walla River, Main Walla Walla River, No. Fork Walla Walla River, So. Fork Willow Creek	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cold Springs	50.0	22.2	23.9	20.9
McKay	73.8	30.8	5.3	19.9

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
0320	Butter Creek near Pine City	c	March-July	14.5	
0225	McKay near Pilot Rock	c	Feb.-Sept.	62	
			April-Sept.	32	
0200	Umatilla near Gibbon	c	April-Sept.	93	
0210	Umatilla at Pendleton	c	April-July	178	
			April-Sept.	183	
0100	Walla Walla, South Fork near Milton	c	April-July	62	
			April-Sept.	76	

SOIL MOISTURE

STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Athena-Weston	1700	48	18.7	12-29-64	14.4	13.7	15.0
Battle Mountain Summit	4340	48	13.8	12-21-64	12.1	12.4	11.7
Emigrant Springs	3925	48	22.3	12-21-64	18.5	18.6	19.9
Tollgate	5070	48	23.6	12-29-64	19.3	19.0	21.3

SNOW

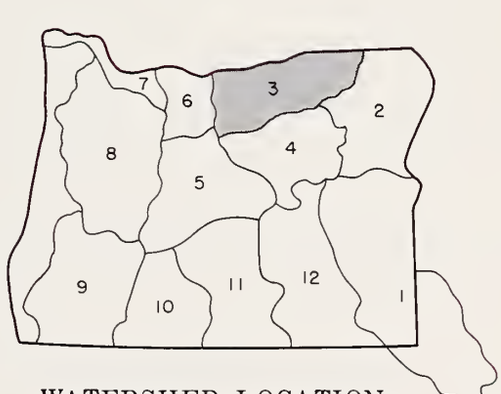
SNOW COURSE NAME	SNOW COURSE ELEVATION	CURRENT INFORMATION DATE OF SURVEY	CURRENT INFORMATION SNOW DEPTH (Inches)	CURRENT INFORMATION WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	PAST RECORD WATER CONTENT (Inches) 1948-62 AVERAGE
Arbuckle Mountain	5400	c				
Battle Mountain Summit	4340	12/21	10	1.4	0.5	- -
Blue Mountain Camp	4300	12/29	29	8.8	4.2	- -
Emigrant Springs	3925	12/21	18	3.3	0.8	2.3[h]
Lucky Strike	5050	c				
Meacham	4300	12/21	25	5.3	1.7	3.3[h]
Tollgate	5070	12/29	41	12.8	8.6	9.6[h]
Weston Mountain	2700	12/29	2	0.2	0.0	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station



WATERSHED LOCATION

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook for the Upper John Day basin is excellent at this early winter date. Snow cover has continued to accumulate since the Christmas week floods and is now 151 percent of the January 1 average for the 15 years 1948-62. Soil moisture is satisfactory.

SNOW COVER

Water content of mountain snow cover, heavily reduced by the rains and melting at the end of December, has continued to accumulate and is much better than the average for January 1 and about 233 percent of last year's snowpack. Only the very low elevation snow has failed to re-accumulate.

SOIL MOISTURE

Watershed soils are well recharged averaging about 20 percent wetter than last year for a total of 87 percent of capacity.

STREAMFLOW

Flow of the John Day River at Service Creek* has been three times average for the October 1, 1964-January 1, 1965 period. Flow in December was 492 percent of the 15 year average.

Spring and summer streamflow on the John Day will probably be well above average if normal conditions of temperature and precipitation prevail for the balance of the winter and spring season.

* Preliminary data from U.S.Geological Survey, Portland, Oregon.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek Beech Creek-Fox-Long Cr. Bridge-Mountain Creeks Camas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Day River, Mid. Fork John Day River, N. Fork John Day River, S. Fork Monument-Kimberly Strawberry Creek	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0385	John Day at Prairie City	c	March-July	56	
			April-Sept.	51	
0440	John Day, Middle Fork at Ritter	c	March-July	153	
			April-Sept.	131	
0375	Strawberry near Prairie City	c	April-Sept.	8.8	

SOIL MOISTURE

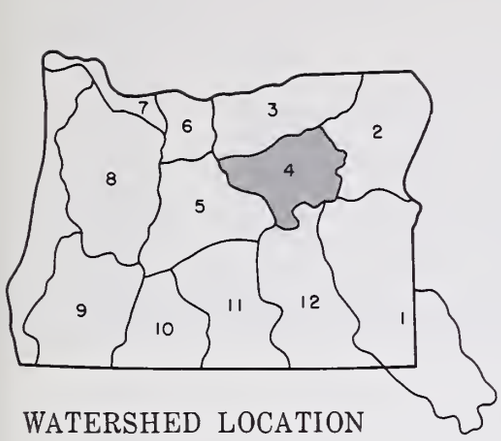
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mountain Summit	4340	48	13.8	12-21-64	12.1	12.4	11.7
Blue Mountain Springs	5900	42	16.9	1-4-65	13.1	7.2	12.3
Blue Mountain Summit	5100	36	16.8	12-30-64	11.6	9.3	11.9
Derr	5670	24	9.0	b			
Marks Creek	4540	36	14.1	12-28-64	13.7	9.2	10.0
Snow Mountain	6300	48	16.7	12-31-64	16.3	12.2[f]	13.4[f]
Starr Ridge	5150	36	10.6	1-4-65	10.4	7.0	10.3

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Anthony Lake	7125	12/28	72	21.1	8.5	11.9
Arbuckle Mountain	5400	c				
Battle Mountain Summit	4340	12/21	10	1.4	0.5	- -
Beech Creek Summit	4800	12/28	6	1.3	1.6	2.0[h]
Blue Mountain Springs	5900	12/28	40	11.6	3.6	6.0[h]
Blue Mountain Summit	5098	12/30	19	4.8	1.5	3.5
Derr	5670	c				
East Fork Canyon[e]	5700	c				
Gold Center	5340	c				
Indian Creek Butte[e]	6550	c				
Izee Summit	5293	12/29	17	4.7	1.9	3.1[h]
Lucky Strike	5050	c				
Marks Creek	4540	12/28	9	1.8	2.2	1.4[m]
Ochoco Meadows	5200	c				
Olive Lake	6000	Report	delayed			
Schoolmarm	4775	12/30	12	1.8	1.1	2.6[h]
Snow Mountain	6300	12/31	40	9.9	- -	- -
Starr Ridge	5150	12/29	14	4.2	1.2	2.4[h]
Tipton	5100	12/30	27	5.9	3.0	4.9[h]
Williams Ranch	4500	12/29	2	0.2	- -	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS



WATERSHED LOCATION

10 0 10 20 30
SCALE IN MILES

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aeriol Snow Depth Goge
- Precipitation Goge

OR-4c

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook for Deschutes, Jefferson and Crook counties is good. The snowpack is above average and soils are well primed for spring runoff. Reservoir storage is above average in all but Wickiup Reservoir.

SNOW COVER

Water content of the snowpack on the Deschutes watershed is 144 percent of the 1948-62 average and about 3 1/2 times last year's water content at this time.

Snow water content on Crooked River is 129 percent of average as measured at Marks Creek.

These measurements were taken after the Christmas week thaw and reports indicate a continued accumulation of the snowpack since the surveys.

SOIL MOISTURE

Above average precipitation and warm temperatures which melted snow at lower elevations on the watersheds primed the soils. Watershed soil moisture is 97 percent of capacity and much wetter than the last two years.

RESERVOIR STORAGE

Reservoir storage was boosted greatly by the high streamflow during the late December thaw. Crane Prairie Reservoir contains 56,900 acre feet or 153 percent of average. Last year it held 34,600 acre feet on January 1. Crescent Lake contains 54,500 acre feet or 116 percent of average. It held 47,900 acre feet last year at this time. Wickiup has 117,200 acre feet in storage or 86 percent of average and about the same as last year.

Crooked river reservoirs received record December inflow. Ochoco Reservoir contains 39,700 acre feet or 227 percent of average. It held only 21,300 acre feet last year at this time. Prineville Reservoir filled and began spilling to leave room for more inflow. On January 1 it had 151,500 acre feet in storage.

STREAMFLOW

Flow of the Deschutes at Moody* was 172 percent of average during December and 116 percent for the October 1-January 1 period.

Spring and summer streamflow is expected to be average or above if normal conditions of temperature and precipitation occur during the remainder of the period.

*Preliminary streamflow data from the U. S. Geological Survey, Portland, Oregon.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District Bear Creek Beaver Creek Camp Creek Central Ore. Irrig. Dist. Crooked River Deschutes River Hay-Trout Creeks Lone Pine Irrig. Dist. Mill Creek North Unit Irrig. Dist. Ochoco Creek Sisters Irrigation Dist. Snow Creek Irrig. Dist. Squaw Creek Irrig. Dist. Swalley Ditch Tumalo Project Walker Basin Irrig. Dist.	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Crane Prairie	55.3	56.9	34.6	37.1
Crescent Lake	117.2	54.5	47.9	46.9
Ochoco	47.5	39.7	21.3	17.5
Prineville	153.0	151.5	99.7	- -
Wickiup	182.0	117.2	117.1	135.5

Note: Current storage figure for Crescent Lake includes 5360 acre feet of known dead and inactive storage.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

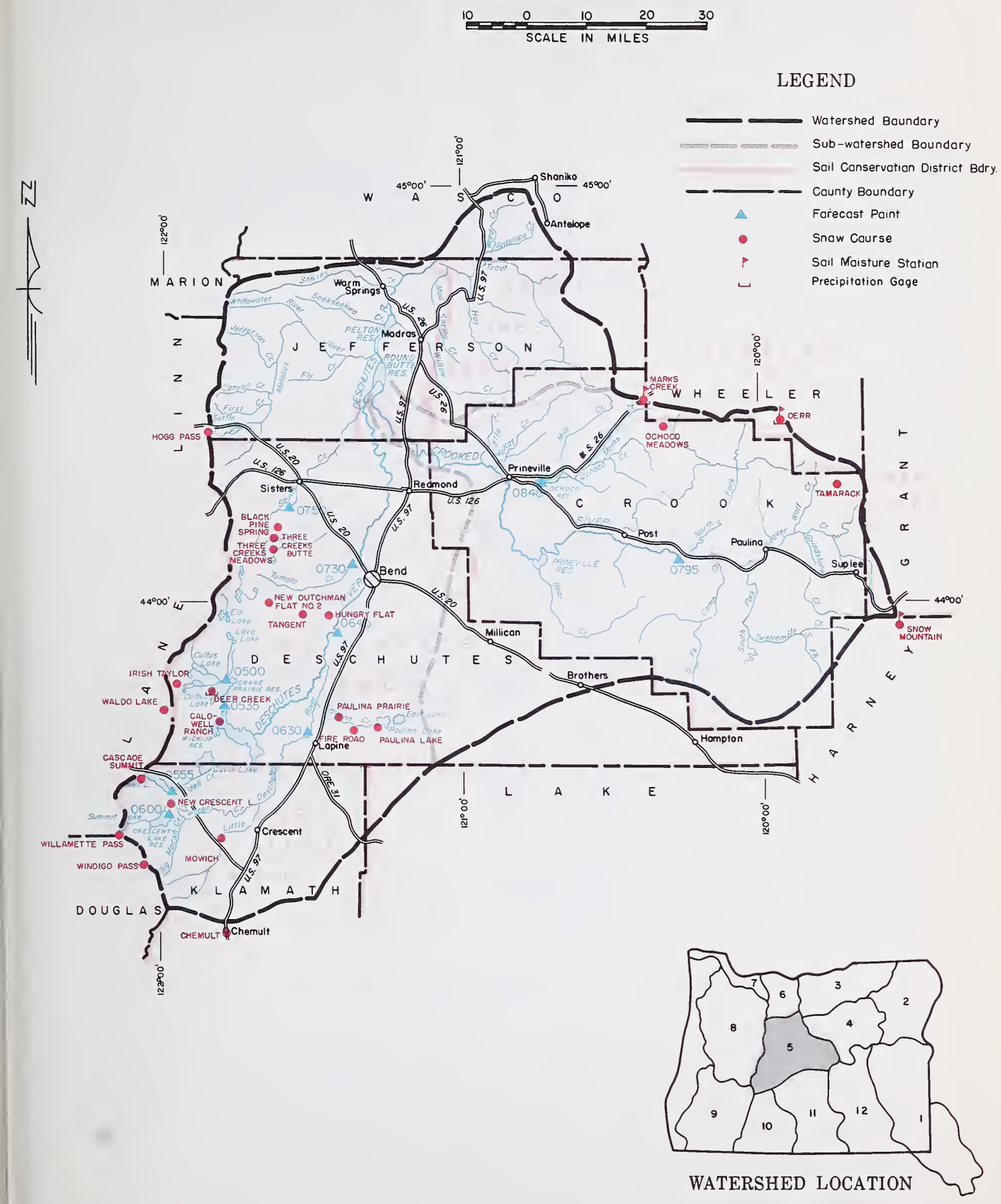
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0535	Crane Prairie Reservoir total inflow	c	April-Sept.	143	
0600	Crescent at Crescent Lake[d]	c	March-July	30	
			April-Sept.	33	
0795	Crooked near Post	c	Feb.-July	201	
			April-Sept.	125	
0645	Deschutes at Benham Falls[d]	c	April-July	417	
			April-Sept.	631	
0500	Deschutes below Snow Creek	c	April-Sept.	75	
0630	Deschutes, Little near Lapine[d]	c	Feb.-July	130	
			April-Sept.	113	
0848	Ochoco Reservoir net Inflow	c	Feb.-June		
			April-Sept.		
0555	Odell near Crescent	c	April-Sept.	34	
0750	Squaw near Sisters	c	April-Sept.	56	
0730	Tumalo near Bend[d]	c	April-Sept.	54	

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Derr	5670	24	9.0	b			
Marks Creek	4540	36	14.1	12-28-64	13.7	9.2[f]	10.0[f]
Snow Mountain	6300	48	16.7	12-31-64	16.3	12.2[f]	13.4[f]

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



WATERSHED LOCATION

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Black Pine Spring	4600	c				
Caldwell Ranch	4400	c				
Cascade Summit	4880	1/1	65	20.2	4.9	13.2[h]
Chemult	4760	12/27	15	4.3	2.8	4.8
Deer Creek	4554	c				
Derr	5670	c				
Fire Road	5050	c				
Hogg Pass	4755	12/30	90	25.4	6.7	16.6
Hungry Flat	4400	c				
Irish-Taylor	5500	c				
Marks Creek	4540	12/28	9	1.8	2.2	1.4[m]
Mowich	4700	c				
New Crescent Lake	4800	c				
New Dutchman Flat #2	6400	c				
Ochoco Meadows	5200	c				
Paulina Lake	6330	c				
Paulina Prairie	4285	c				
Snow Mountain	6300	12/31	40	9.9	- -	- -
Tamarack	4800	c				
Tangent	5400	c				
Three Creeks Butte	5200	c				
Three Creeks Meadows	5600	c				
Waldo Lake	5500	c				
Willamette Pass	5600	c				
Windigo Pass	5800	c				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook in Hood River and Wasco counties is very good with watershed soils nearly saturated, reservoirs filling adequately and a mountain snowpack 2 1/2 times greater than last year at this date.

SNOW COVER

Low elevation snow was mostly removed during the period of warm temperatures and heavy rainfall in late December. Water content of the mountain snowpack has accumulated since the floods to an amount equal to the January 1 average. The snow is about 2 1/2 times as great as a year ago.

SOIL MOISTURE

Watershed soils are nearly saturated, especially at the lower elevations, which gained water during the excessive runoff period.

RESERVOIR STORAGE

Clear Lake Reservoir contains 3,200 acre feet of water compared with none at this date last year and should receive an adequate inflow from this year's snowpack.

STREAMFLOW

Flow of most local streams was below average previous to the extreme runoff conditions which prevailed in late December. December flows were undoubtedly much above the average. The gaging station for Hood River near Hood River was washed out by the flood runoff.

Spring and summer streamflows are expected to be at least average.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrig. Dist. Hood River Irrig. Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Crs. Tygh Creek White River	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	11.8	3.2	0.0	- -

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
1210	Hood River near Hood River[d]	c	April-July	322	
			April-Sept.	381	
1185	Hood, West Fork near Dee	c	April-July	155	
			April-Sept.	179	
1015	White below Tygh Valley	c	April-July	158	
			April-Sept.	176	

SNOW

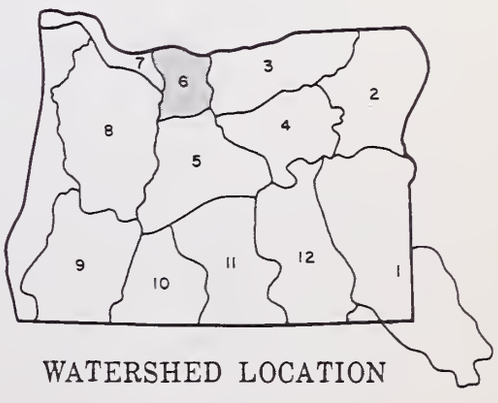
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Brooks Meadows	4300	c				
Clear Lake	3500	12/30	21	6.2	0.2	3.4[h]
Clear Lake (Experimental)	3500	12/30	34	8.9	1.8	- -
Cooper Spur	3490	12/31	26	7.9	3.2	- -
Greenpoint Reservoir	3400	c				
Knebal Springs	3850	c				
Lambert Point	7000	Not surveyed				
Parkdale	1770	12/31	9	1.7	0.0	- -
Phlox Point	5600	12/31	87	28.2	17.1	27.2
Red Hill	4400	c				
Still Creek	3700	12/30	39	10.0	3.2	10.8
Switchback	3255	c				
Tilly Jane	6000	c				
Ulrich Ranch Junction	3350	c				
Umbrella Falls	5400	Not surveyed				
Upper Valley	2530	12/31	15	4.0	1.7	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aeriol Snow Depth Goge
- Soil Moisture Station



WATERSHED LOCATION

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply outlook is good throughout the Columbia Basin for both irrigation and power for 1965. Streamflow forecasts based on mountain snow accumulation are not made on this early date, but present prospects are that the summer flow of all streams in the basin will be at least average. There are few, if any, shortages of stored water, or areas where reservoirs are not expected to fill during the irrigation season. In fact, many are being lowered at this time or have plans for releasing water before the spring snowmelt season.

SNOW COVER

Snow accumulation to January 1 is relatively heavy at the higher mountain elevations, generally in the range of 150 percent of average. Much of the lower elevation snow melted during the late December flood period and added substantially to streamflow. Snow accumulation during late December and January has been heavy particularly at valley and plateau elevations in eastern Washington and Oregon and western Idaho. Snowmelt along the Continental Divide in British Columbia, Montana and Wyoming was limited to the lowest elevation snow courses.

SOIL MOISTURE

Mountain and valley soils tend to be wet over the entire basin at this time.

STREAMFLOW

The flow of the Columbia at The Dalles, Oregon* has been above average since October 1 and extremely high for the month of December. Flood flows exceeding any year since 1948 occurred in the Columbia below its confluence with the Willamette. The record for the flow at The Dalles by months is as follows:

Month	Percent of average discharge (1948-62)
October	113 (Adjusted for storage)
November	97 " " "
December	163 " " "

*Preliminary data furnished by Current Records Center, U. S. Geological Survey, Portland, Oregon.

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STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
1057	Columbia at The Dalles	c	April-June April-Sept.	74,100 108,500	

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW[d] (1,000 A.F.) APR. — SEPT.	APR. — JUNE	MAY — JUNE	PEAK (1,000 c.f.s.)	DATE
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105.700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1948-62 Avg.	108,500	74,100	60,200	633	
1963	87,000	56,300	46,200	437	June 18

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES 118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook for the Willamette Valley is excellent at this early winter date. Reservoirs now hold above average water supplies and are spilling to make room for flows expected to come. Soil moisture in mountain watersheds is near saturation and the snowpack is well above average.

SNOW COVER

Abnormally high temperatures and rainfall erased all snow from the lower elevations in late December. Since then snow has accumulated nearly continuously and is now 145 percent average in water content. The snowpack is three times heavier than at this date last year.

SOIL MOISTURE

Watershed soils are close to saturation at all but the highest elevations. This factor will favor runoff next spring and summer.

RESERVOIR STORAGE

As of January 1 seven multi-purpose reservoirs on Willamette tributaries held much more water than usual for this date, but they were spilling to provide space for future runoff. Total water stored in these reservoirs was 68 percent of their total capacity.

Timothy Lake, operated by Portland General Electric Company on the Clackamas watershed, was nearly full with 61,100 acre feet in storage.

STREAMFLOW

Spring and summer flows of Willamette tributaries rising on the west slope of the Cascades are expected to be well above the 15 year average (1948-62) this season.

Flow of the Middle Fork of the Willamette* below North Fork averaged 205 percent for the period October 1, 1964 through January 1, 1965. The flow during December was 341 percent of average.

*Preliminary data furnished by U. S. Geological Survey, Portland, Oregon.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya Clackamas McKenzie Molalla Santiam, North Santiam, South Willamette, Coast Fork Willamette, Middle Fork	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottage Grove	30.8*	14.6	0.2	1.3
Cougar	219.3*	115.8	0.0	- -[m]
Detroit	299.9*	209.7	10.0	38.0[m]
Dorena	70.5*	52.4	2.1	6.5[m]
Fern Ridge	94.2*	85.2	0.0	8.7
Hills Creek Res.	249.0*	152.3	3.8	- -[m]
Lookout Point	337.2*	256.6	20.7	63.3[m]
Timothy Lake	61.7	61.1	52.6	40.2[m]

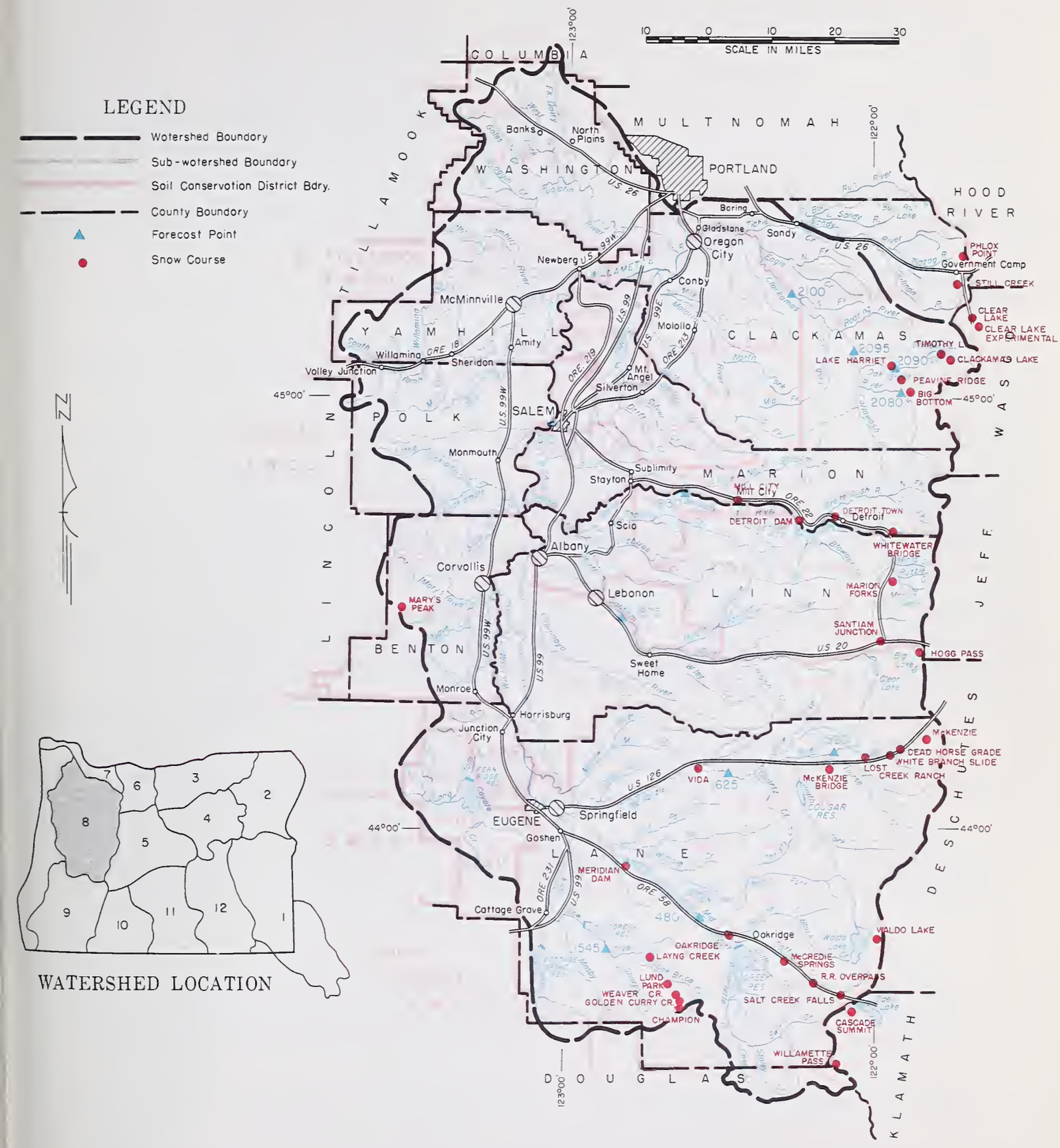
*Multiple purpose reservoir--space reserved primarily for flood runoff.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
2080	Clackamas at Big Bottom	c	April-July	150	
			April-Sept.	184	
2100	Clackamas at Estacada	c	April-July	770	
			April-Sept.	890	
2095	Clackamas above Three Lynx	c	April-July	584	
			April-Sept.	683	
1590	McKenzie at McKenzie Bridge	c	April-July	502	
			April-Sept.	658	
1625	McKenzie near Vida	c	April-July	1144	
			April-Sept.	1392	
2090	Oak Grove Fork above Power Intake	c	April-July	147	
			April-Sept.	190	
1545	Row near Dorena	c	April-July	108	
			April-Sept.	112	
1830	Santiam, North at Mehama[d]	c	April-July	884	
			April-Sept.	991	
1875	Santiam, South at Waterloo	c	April-July	637	
			April-Sept.	675	
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge[d]	c	April-July	804	
			April-Sept.	909	
1910	Willamette at Salem[d]	c	April-July	5040	
			April-Sept.	5566	

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Big Bottom	2118	Not	Surveyed			
Cascade Summit	4880	1/1	65	20.2	4.9	13.2[h]
Champion	4500	Not	Surveyed			
Clackamas Lake	3400	[c]				
Clear Lake	3500	12/30	21	6.2	0.2	3.4[h]
Clear Lake (Experimental)	3500	12/30	34	8.9	1.8	- -
Dead Horse Grade	3800	1/4	52	10.3	3.7	8.8[h]
Detroit Town	1610	12/31	21	3.8	0.0	0.3[h]
Detroit Dam	1580	12/31	16	2.2	0.0	0.3[h]
Golden Curry Creek	3136	Not	Surveyed			
Hogg Pass	4755	12/30	90	25.4	6.7	16.6
Lake Harriet	2045	Not	Surveyed			
Layng Creek	1200	1/2	6	1.0	0.0	0.0[m]
Lost Creek Ranch	1956	1/4	16	3.2	1.7	1.2[h]
Lund Park	1740	Not	Surveyed			
Marion Forks	2730	Not	Surveyed			
Marys Peak	3620	[c]				
McCredie Springs	2120	Not	Surveyed			
McKenzie	4800	1/4	86	31.4	15.5	22.2[h]
McKenzie Bridge	1372	1/4	16	3.2	1.5	0.1[h]
Meridian Dam	750	Not	Surveyed			
Mill City	826	12/31	8	1.2	0.0	0.0[m]
Oakridge	1310	Not	Surveyed			
Peavine Ridge	3500	Not	Surveyed			
Phlox Point	5600	12/31	87	28.2	17.1	27.2
Railroad Overpass	2750	Not	Surveyed			
Salt Creek Falls	4000	1/1	46	10.8	0.0	6.0[h]
Santiam Junction	3990	Not	Surveyed			
Still Creek	3700	12/30	39	10.0	3.2	10.8[h]
Timothy Lake	3295	1/3	40	10.2	1.3	6.9[h]
Vida	800	1/4	9	2.5	0.0	0.0[h]
Waldo Lake	5500	[c]				
Weaver Creek	2440	Not	Surveyed			
White Branch Slide	2800	1/4	25	4.3	2.2	3.1[h]
Whitewater Bridge	2175	Not	Surveyed			
Willamette Pass	5600	[c]				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
ROGUE, UMPQUA, WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook for the Umpqua and Rogue basins is excellent with local reservoirs already full or spilling to make room for expected inflows yet to come.

SNOW COVER

Water content of the mountain snowpack, heavily depleted during the Christmas week floods, has accumulated faster than usually expected. On the Umpqua, the snowpack is 177 percent of the January 1 average and 270 percent of last year at this date. The snowpack on Rogue watersheds is now 143 percent of the 15 year average (1948-62) and 507 percent of last year on January 1.

SOIL MOISTURE

The soil-mantle under the snowpack is very near saturation and will favor runoff from melting snow in the spring.

RESERVOIR STORAGE

Stored water for the Medford and Rogue River Valley Irrigation Districts is held in Fish Lake and Fourmile Lake. Fish Lake is full and spilling and employees have not reached Fourmile to read the gage there.

Water stored for the Talent Irrigation District, held in Howard Prairie, Hyatt Prairie and Emigrant Gap reservoirs, is practically double the average amount and is 138 percent of last year on January 1. Emigrant is being spilled to accomodate expected flows at a later date.

STREAMFLOW

Flow of the Rogue River at Raygold* has been 263 percent average in the period since October 1, 1964 but was nearly 4 1/2 times the average flow for December. Grants Pass Irrigation District should have an adequate water supply during the 1965 season.

Flow of Big Butte Creek is expected to be satisfactory for the needs of the Eagle Point Irrigation District this season.

Flow of the Umpqua River near Elkton* has been 216 percent average since October 1, 1964 and 323 percent average during December.

* Preliminary data from Pacific Power & Light Company, Medford, Oregon and from U. S. Geological Survey, Portland, Oregon.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek		
Applegate River, Big		
Applegate River, Little		
Ashland Creek		
Butte Creek, Little		
Butte Creek, Big		
Cow Creek		
Deer Creek		
Elk Creek		
Emigrant Creek (abv. Res.)	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	
Evans Creek		
Gold Hill Irrigation Dist.		
Grants Pass Irrig. Dist.		
Grave Creek		
Illinois River, East Fork		
Illinois River, West Fork		
Jump-off-Joe Creek		
Neil Creek		
Red Blanket Creek		
Rogue River		
Sucker Creek		
Table Rock Irrig. Dist.		
Thompson Creek		
Wagner Creek		
Williams Creek		

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Emigrant Gap	39.0	28.0	18.7	15.7*
Fish Lake	7.8	7.9	4.0	4.7
Fourmile Lake	16.1	b	11.7	7.9
Howard Prairie	60.0	60.6	45.8	- -
Hyatt Prairie	16.1	15.3	10.7	6.4

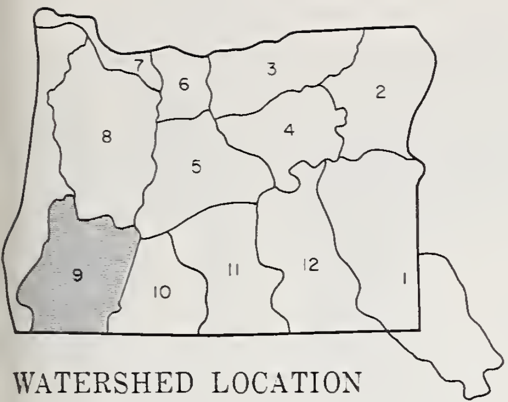
* 4 year average.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3620	Applegate near Copper	c	April-Sept.	142	
3145	Clearwater above Trap Creek[d]	c	April-Sept.	75	
5045	Fourmile Lake net Inflow[d]	c	Feb.-Sept.	7.0	
5140	Hyatt Reservoir net Inflow[d]	c	April-Sept.	6.4	
3770	Illinois River at Kerby	c	March-July	348	
			April-Sept.	212	
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr.[d]	c	April-Sept.	16.0	
3415	Little Butte, S. Fork near Lake Creek	c	April-July	38	
3280	Rogue above Prospect	c	April-July	295	
			April-Sept.	355	
3320	Rogue, South Fork near Prospect[d]	c	April-July	70	
			April-Sept.	82	
3350	Rogue below South Fork	c	April-July	611	
			April-Sept.	754	
3590	Rogue at Raygold near Central Point	c	April-July	837	
			April-Sept.	1001	
3615	Rogue at Grants Pass [d]	c	April-Sept.	993	
3135	Umpqua, North blw. Lemolo Res. nr. Toketee Falls	c	April-Sept.	186	

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS



WATERSHED LOCATION

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Althouse	4530	c				
Annie Spring	6018	12/28	82	26.5	11.4	16.6
Beaver Dam Creek	5100	Report	delayed			
Big Red Mountain	6500	c				
Billie Creek Divide	5300	12/29	39	9.9	3.0	9.6 h
Champion	4500	Not	surveyed			
Cold Springs Camp	6100	c				
Deadwood Junction	4600	Report	delayed			
Diamond-Crater Summit	5800	12/30	102	27.0	8.2	- -
Diamond Lake	5315	12/30	70	16.5	4.6	10.0
Eden Valley Summit	2390	Not	surveyed			
Fish Lake	4865	Not	surveyed			
Fourmile Lake	6000	Not	surveyed			
Grayback Peak	6000	c				
Howard Prairie	4500	Report	delayed			
Hyatt Prairie Reservoir	4900	Report	delayed			
King Mountain #1	4800	Not	surveyed			
King Mountain #2	3646	Not	surveyed			
King Mountain #3	2550	Not	surveyed			
King Mountain #4	1779	Not	surveyed			
Little Red Mountain	6500	c				
North Umpqua	4215	1/5	39	11.1	0.6	6.7 h
Page Mountain	4045	c				
Park Headquarters	6450	12/28	130	43.7	18.1	22.2
Red Butte #1	4560	Not	surveyed			
Red Butte #2	4000	Not	surveyed			
Red Butte #3	3500	Not	surveyed			
Red Butte #4	3000	12/31	20	3.0	0.0	- -
Red Butte #5	2500	12/31	18	2.2	0.0	- -
Red Butte #6	2000	Not	surveyed			
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
Silver Burn	3720	12/24	0	0.0	0.8	5.0
Siskiyou Summit	4630	12/27	8	0.8	0.0	3.0
South Fork Canal	3500	12/24	0	0.0	0.0	1.6
Trap Creek	3800	1/5	31	8.6	0.1	3.8 h
Whaleback	5140	c				
Windigo Pass	5800	c				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook in the Klamath basin is very good at this early-winter date. Mountain snowpacks contain double the moisture of last year and watershed soils are well primed as a result of rainfall and snowmelt. Reservoired water supplies are double the figures of last year and are well above the 15 year average (1948-62) amounts.

SNOW COVER

Water content of the snowpack is 228 percent of last year and 134 percent of average.

SOIL MOISTURE

The soil moisture station at Bly Mountain highway summit indicates a 91 percent of capacity at that site.

RESERVOIR STORAGE

Upper Klamath Lake is reported to be at the highest level since Link River Dam was installed and contains over 620,000 acre feet of water.

Gerber Reservoir contains 78,000 acre feet which is double the usual January 1 amount and three times that of last year.

Clear Lake is estimated to hold 190,000 acre feet or about 100,000 acre feet more than last year.

STREAMFLOW

Inflow to Upper Klamath Lake in December was an amazingly high figure of 462,000 acre feet.

Gerber and Clear Lake reservoirs have received close to 44,000 and 90,000 acre feet respectively. These are huge amounts for the month of December and will help provide adequate water for the 1965 irrigation season.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	440.2	190.0*	92.3	175.7
Gerber	94.0	78.0	35.7	26.4
Upper Klamath Lake	584.0	621.0	293.4	328.4

*Estimated

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
923	Clear Lake Reservoir Inflow[k]	c	Feb.-June	98	
			April-Sept.	48	
8215	Gerber Reservoir Inflow[k]	c	Feb.-June	48	
			April-Sept.	23	
5010	Sprague near Chiloquin	c	Feb-Sept.	390	
			April-Sept.	289	
5070	Upper Klamath Lake net Inflow[d k]	c	Feb.-Sept.	1002	
			April-Sept.	639	
5025	Williamson below Sprague River	c	Feb.-Sept.	683	
			April-Sept.	490	

SOIL MOISTURE

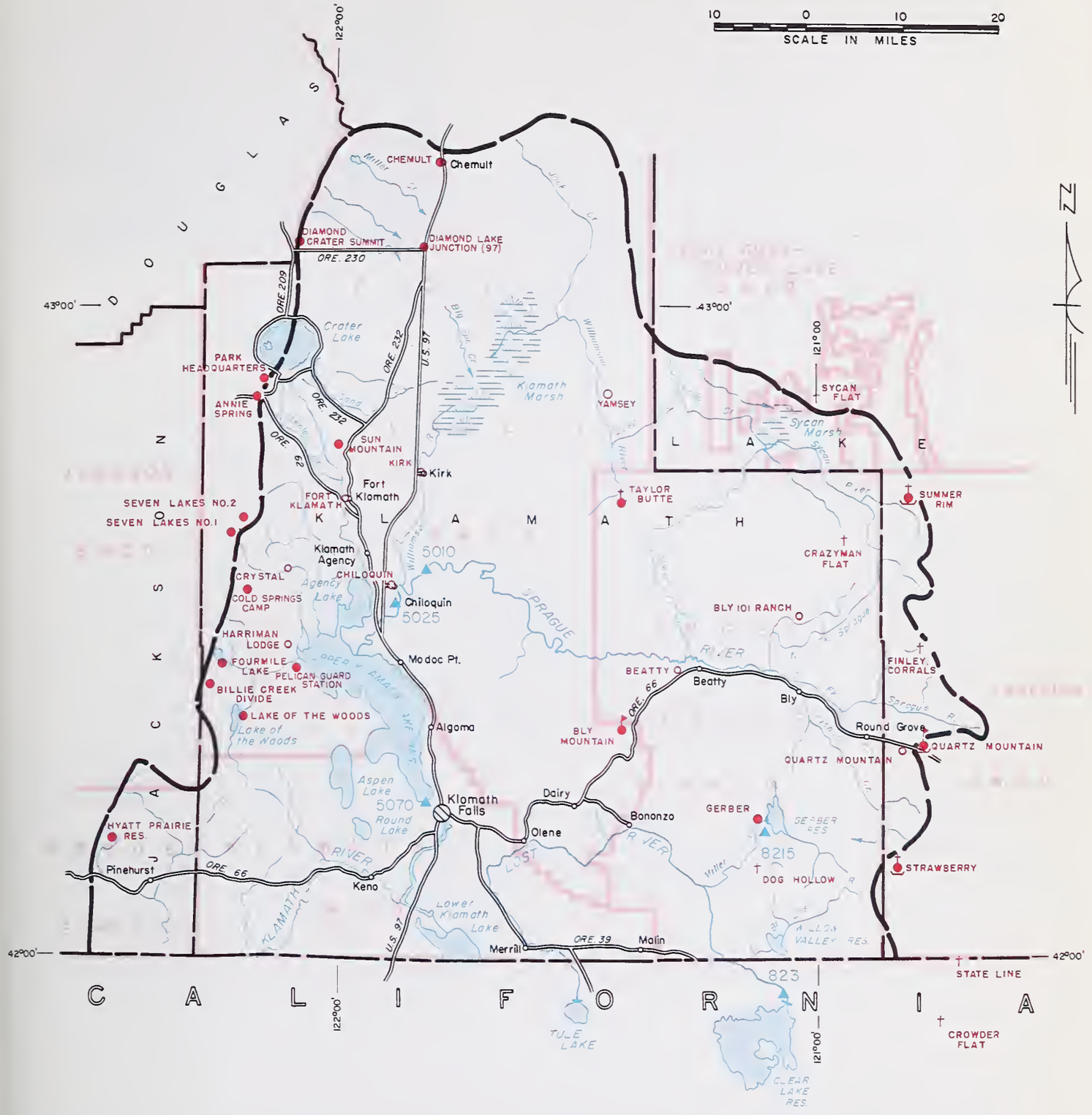
STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bly Mountain	5090	42	14.0	1-5-65	12.8	10.2	12.4

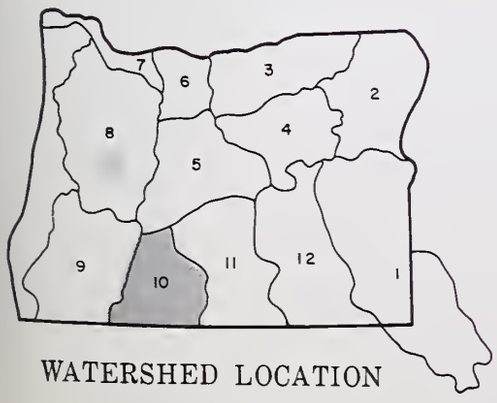
SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	1948-62 AVERAGE
Annie Springs	6018	12/28	82	26.5	11.4	16.6
Beatty (PP&L)	4300	12/31	6	0.5	0.0	0.2
Billie Creek Divide	5300	12/29	39	9.9	3.0	9.6[h]
Bly Mountain	5090	12/31	8	1.3	1.9	2.7[m]
Bly 101 Ranch (PP&L)	4800	12/31	8	0.9	0.0	0.9
Chemult	4760	12/27	15	4.3	2.8	4.8
Chiloquin (PP&L)	4187	12/31	10	1.5	0.0	0.9
Cold Springs Camp	6100	c				
Crazyman Flat[e]	6100	c				
Crowder Flat[e] (Calif.)	5200	c				
Crystal (PP&L)	4200	Report	delayed			
Diamond-Crater Summit	5800	12/30	102	27.0	8.2	- -
Diamond Lake Junction (97)	4600	12/30	16	2.8	4.6	- -
Dog Hollow[e]	4900	c				
Finley Corrals[e]	6000	c				
Fort Klamath (PP&L)	4150	12/31	10	1.1	0.9	1.5
Gerber	4850	Not	surveyed			
Harriman (PP&L)	4200	12/31	9	0.8	T	2.0
Hyatt Prairie Reservoir	4900	Report	delayed			
Kirk (PP&L)	4533	12/31	10	1.8	3.8	3.2
Lake of the Woods	4960	Not	surveyed			
Park Headquarters	6450	12/28	130	43.7	18.1	22.2
Pelican Guard Station	4150	12/29	0	0.0	T	- -[h]
Quartz Mountain	5320	12/31	11	2.4	0.8	3.0[m]
Quartz Mountain (PP&L)	5504	12/31	16	2.6	1.0	3.2
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
State Line (Calif.)	5750	c				
Strawberry	5760	c				
Summer Rim	7200	c				
Sun Mountain	5350	12/31	49	13.6	5.5	10.4
Sycan Flat[e]	5500	c				
Taylor Butte	5100	12/28	6	0.6	T	2.2[m]
Yamsey (PP&L)	4600	Report	delayed			

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS





WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aeriol Snow Depth Goge
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Goge

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of

JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 water supply outlook in Lake County is excellent with reservoirs full and spilling, moisture in watershed soils near the point of saturation and mountain snow cover three times as heavy as last year on January 1.

SNOW COVER

Snow surveys at four key snow courses show water content of the snowpack is 309 percent of last year and near average.

SOIL MOISTURE

Watershed soil moisture conditions are excellent. Reports from soil moisture stations at Quartz Mountain and Camas Creek summits indicate the soils at those two sites are very near saturation.

RESERVOIR STORAGE

Drews Reservoir is reported full and spilling with a total storage of 68,090 acre feet of water. Cottonwood had 7060 acre feet on December 30 and the flood gate was open.

STREAMFLOW

The December flow of many Lake County streams has been extremely high and has probably established some new record highs.

Spring and summer flow of local streams is now expected to be at least average.

Report prepared by
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PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottonwood	9.1	7.1	0.9	0.3
Drew	63.0	68.1	36.8	29.4

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3840	Chewaucan near Paisley	c	March-June	89	
3715	Deep above Adel	c	March-June	78	
3385	Drew Reservoir net Inflow	c	March-July	45	
3785	Honey near Plush	c	March-June	18.0	
3660	Twentymile near Adel	c	March-June	28	

SOIL MOISTURE

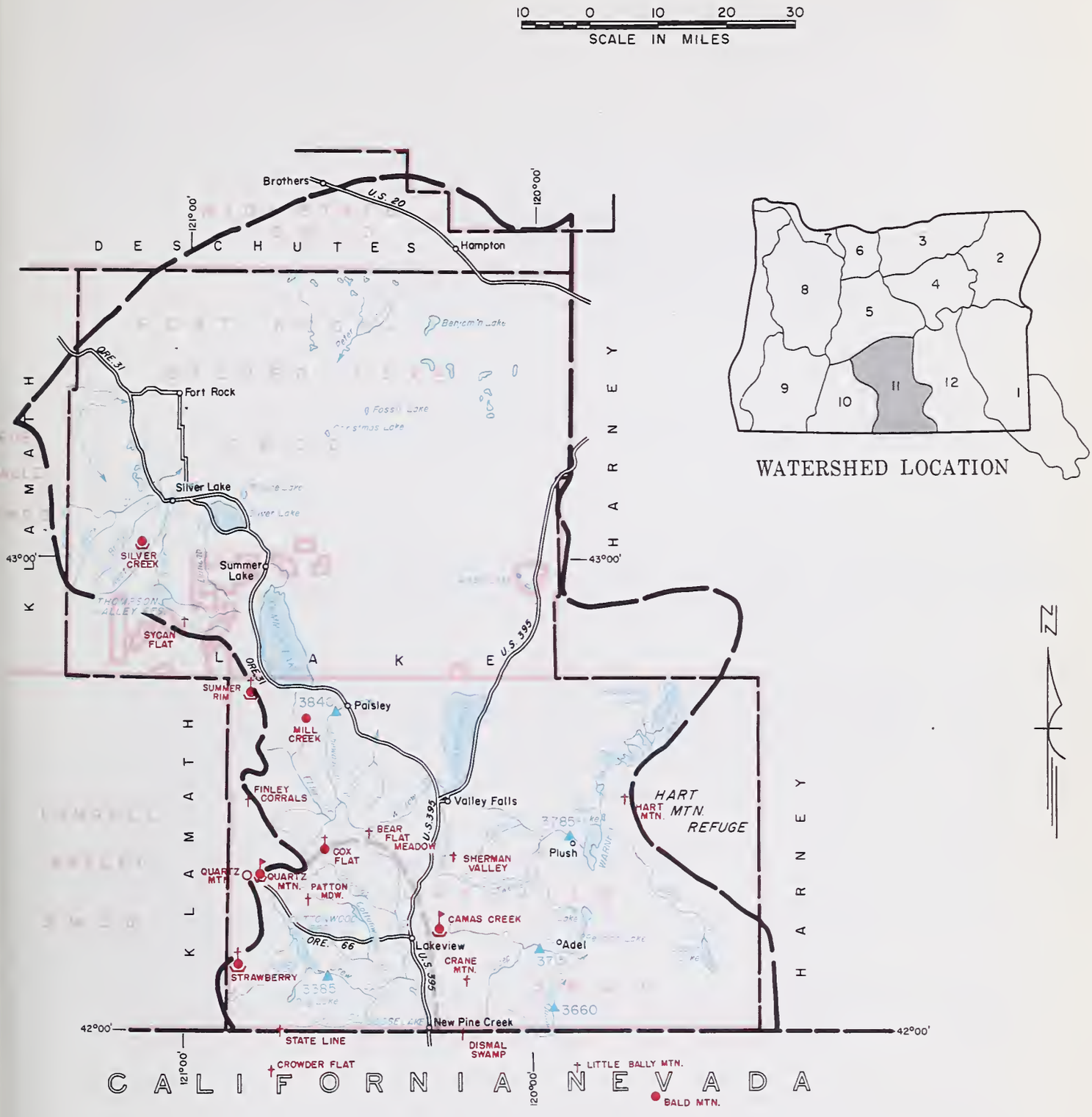
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek	5720	42	14.5	12-30-64	13.2	11.9	12.9
Quartz Mountain	5320	48	15.3	12-31-64	15.0	8.2	11.0

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1948-62 AVERAGE
Bald Mountain (Nev.)	6720	c				
Bear Flat Meadow[e]	5900	c				
Camas Creek	5720	1/4	26	5.6	1.5	- -
Cox Flat[e]	5750	c				
Crane Mountain[e]	6020	c				
Crowder Flat[e] (Calif.)	5200	c				
Dismal Swamp[e] (Calif.)	7000	c				
Finley Corrals[e]	6000	c				
Hart Mountain[e]	6350	c				
Little Bally Mountain[e] (Nev.)	6600	c				
Mill Creek	6200	c				
Patton Meadows[e]	6800	1/7	60	13.2	- -	- -
Quartz Mountain (PP&L)	5504	12/31	16	2.6	1.0	3.2[m]
Quartz Mountain	5320	12/31	11	2.4	0.8	3.0[h]
Sherman Valley[e]	6600	c				
Silver Creek	4900	12/30	8	0.8	0.0	1.9[h]
State Line[e] (Calif.)	5750	c				
Strawberry	5760	c				
Summer Rim	7200	c				
Sycan Flat[e]	5500	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
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- Precipitation Gage

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of
JANUARY 1, 1965

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1965 irrigation water supply outlook in Harney Basin is good as of this early winter date. Snow cover is better than average for January 1 and watershed soils are well primed.

SNOW COVER

Water content of the snow cover in Harney Basin is 139 percent of the 1948-62 January 1 average and 254 percent of last year at this time. Snow has continued to fall after the Christmas week melt and a good snow cover now lies on wet soil.

SOIL MOISTURE

Watershed soils were partially wetted by late November rains and additional priming occurred as the snow melted during Christmas week. Soil moisture measurements taken after the thaw indicate soils are primed to almost capacity and will soak up little additional moisture.

STREAMFLOW

Harney county streams flowed high and out of their banks in late December, filling reservoirs.

Moon Reservoir was reported as full and spilling and other reservoirs received good inflow.

Flow is expected to be near average on local streams this spring and summer, if normal precipitation and temperature occur during the remainder of the season.

Report prepared by
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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley Cow Creek Donner und Blitzen River Mill-Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier-Prather Creek Trout Creek Whitehorse Creek	Forecasts begin in the February 1 report which will reach you about February 10, 1965.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1965

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1965

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
3960	Donner und Blitzen near Frenchglen	c	March-June	59	
			April-Sept.	62	
4030	Silver near Riley	c	April-July	22[m]	
3935	Silvies near Burns	c	March-June	116	
			April-Sept.	99	
4065	Trout near Denio	c	March-July	8.7	
			April-Sept.	8.4	

SOIL MOISTURE

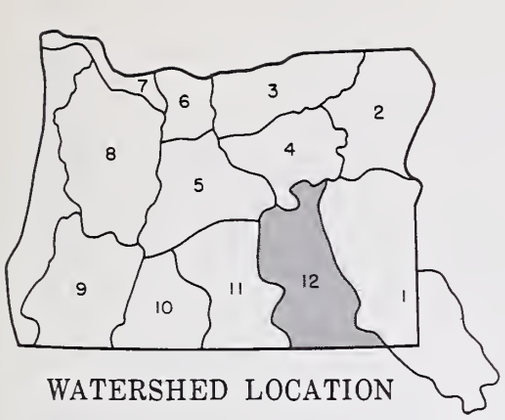
STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Springs	5900	42	16.9	1-4-65	13.1	7.2	12.3
Fish Creek	7600	48	15.0	b			
Folly Farm	4450	30	12.5	12-16-64	8.2	8.3	9.0
Silvies	6900	48	16.4	b			
Snow Mountain	6300	48	16.7	12-31-64	16.3	12.2[f]	13.4[f]
Starr Ridge	5150	36	10.6	1-4-65	10.4	7.0	10.3
Stinking Water Summit	4800	48	21.9	12-17-64	21.3	20.8	21.0
Willow-Bald	5000	24	6.6	1-4-65	6.4	5.0	6.6

SNOW

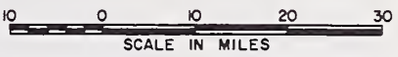
SNOW COURSE NAME	SNOW COURSE ELEVATION	CURRENT INFORMATION DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	1948-62 AVERAGE
Blue Mountain Springs	5900	12/28	40	11.6	3.6	6.0[h]
Buck Pasture[e]	5700	c				
Buckskin Lake[e]	5200	c				
Call Meadows[e]	5340	c				
Crow Camp[e]	5500	c				
Delintment Lake	5600	c				
Denio Creek[e]	6000	c				
Disaster Peak (Nev.)	6500	c				
Emigrant Butte	5000	c				
Fish Creek[e]	7900	c				
Hart Mountain[e]	6350	c				
Idlewild Camp	5200	12/29	12	1.9	0.8	2.1[h]
Izee Summit	5293	12/29	17	4.7	1.9	3.1[h]
Lake Creek	5120	Not	surveyed			
Oregon Canyon[e]	6950	c				
Rock Spring	5100	12/29	9	2.2	1.3	2.1
Silvies[e]	6900	c				
Snow Mountain	6300	12/31	40	9.9	- -	- -[h]
Starr Ridge	5150	12/29	14	4.2	1.2	2.4[h]
Stinking Water	4800	12/28	T	T	0.9	2.0[h]
Trout Creek[e]	7800	c				
"V" Lake[e]	6600	c				

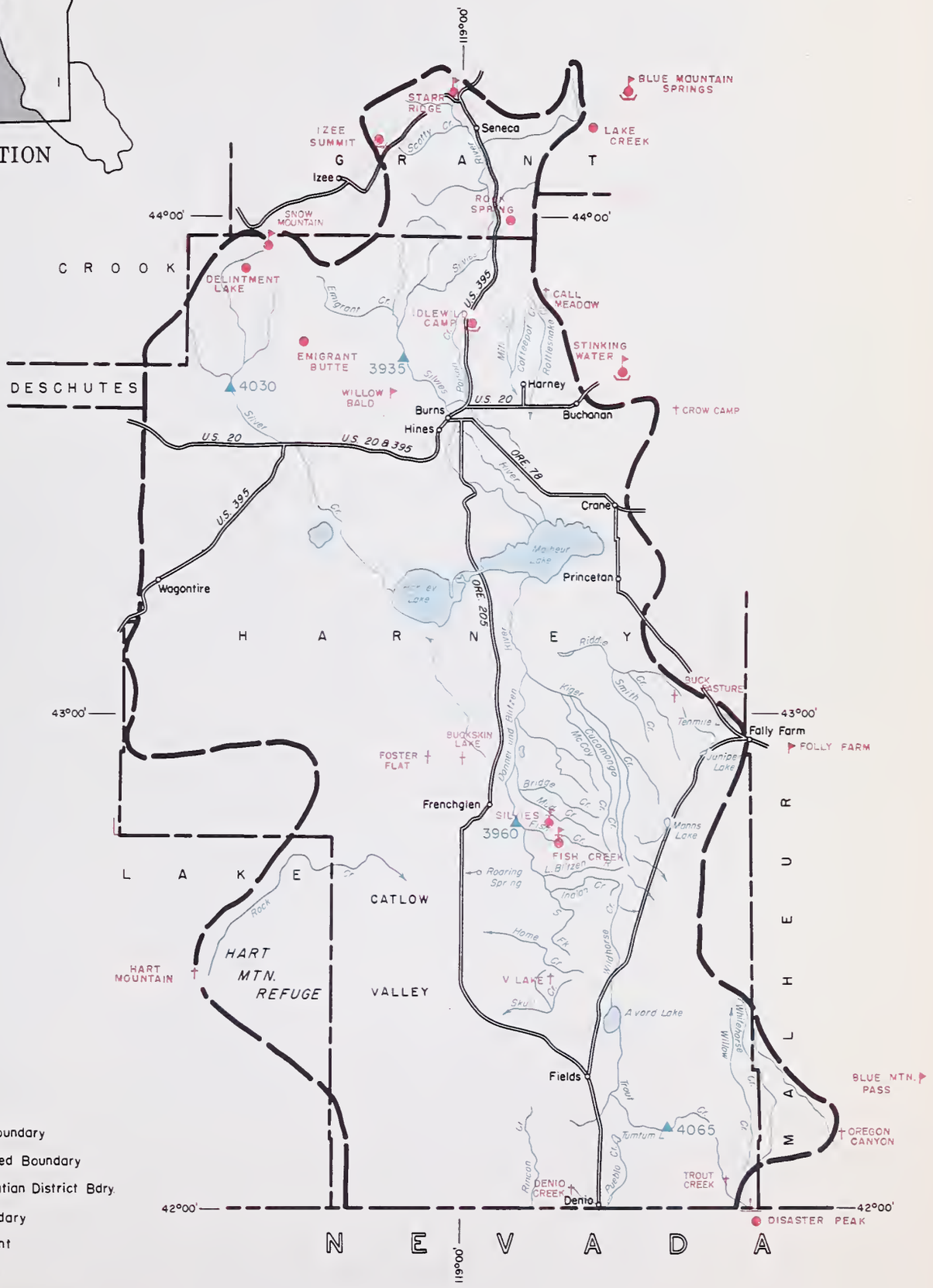
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS



WATERSHED LOCATION





LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Canservatian District Bdry.
- County Boundary
- Forecast Point
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- Aerial Snaw Depth Gage
- Sail Moisture Statian
- Precipitation Gage

"The Conservation of Water begins with the Snow Survey"

OWYHEE, MALHEUR WATERSHEDS (1)

Owyhee River

Number	Name	Sec.	Twp.	Rge.	Elev.
[illegible]	Antelope Ridge (Ida)	20	8S	1W	5900
[illegible]	Battle Creek (Ida)	10	11S	1E	5700
[illegible]	Bear Creek (Nev)	31	46N	58E	7800
[illegible]	Big Bend (Nev)	30	45N	56E	6700
[illegible]	Blue Mtn Pass	4	38S	42E	5290
[illegible]	Buckskin, Lower (Nev)	25	45N	39E	6700
[illegible]	Buckskin, Upper (Nev)	11	45N	39E	7200
[illegible]	Bull Basin (Ida)	29	12S	5W	5600
[illegible]	Disaster Peak (Nev)	8	47N	34E	6500
[illegible]	Fish Creek	4	33S	33E	7900
[illegible]	Folly Farm Summit	8	30S	38E	4450
[illegible]	Fox Creek (Nev)	33	46N	58E	6800
[illegible]	Fry Canyon (Nev)	31	43N	54E	6700
[illegible]	Gold Creek (Nev)	31	45N	56E	6600
[illegible]	Granite Peak (Nev)	22	44N	39E	7800
[illegible]	Hyde Pasture (Ida)	31	8S	2W	5800
[illegible]	Jack Creek, Lower (Nev)	18	42N	53E	6800
[illegible]	Jack Creek, Upper (Nev)	9	42N	53E	7250
[illegible]	Jack Peak (Nev)	28	42N	53E	8420
[illegible]	Jordan Valley	9	30S	46E	4390
[illegible]	Lookout Butte	2	40S	47E	5650
[illegible]	Louse Canyon	27	40S	44E	6440
[illegible]	Martin Creek (Nev)	18	44N	40E	6700
[illegible]	Midas (Nev)	18	39N	46E	7200
[illegible]	Mud Flat (Ida)	34	9S	2W	5500
[illegible]	Oregon Canyon	8	40S	40E	6950
17H6a	Quinn Ridge (Nev)	9	47N	41E	6300
16G11a	Red Canyon (Ida)	32	11S	4W	6500
15H6MP	Rodeo Flat (Nev)	36	43N	53E	6800
15H3A	76 Creek (Nev)	6	44N	58E	7100
16F3	Silver City (Ida)	6	5S	3W	6400
18G1MA	Silvies	35	32S	32½E	6900
16G1	South Mountain No.2 (Ida)	10	8S	5W	6340
16F6a	Succor Creek (Ida)	25	3S	5W	6100
15H9MP	Taylor Canyon (Nev)	35	39N	53E	6200
15H8	Tremewan Ranch (Nev)	9	39N	55E	5700
16G4MA	Triangle (Ida)	25	7S	3W	5150
18G5a	Trout Creek	10	41S	38E	7800
18G7a	"V" Lake	31	35½S	32½E	6600

Malheur River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E14	Barney Creek	16	14S	36E	5950
18E16MP	Blue Mountain Spring	21	15S	35E	5900
18F6a	Buck Pasture	21	29S	35E	5700
18E21a	Bully Creek	10	17S	37E	5300
18F7a	Call Meadows	29	20S	33E	5340
17F2a	Cottonwood-Indian	10	19S	39E	4320
18E19M	Crane Prairie	24	16S	34E	5375
18F8a	Crow Camp	Unsurveyed			
18E20	Eldorado Pass	20	14S	38E	4600
18E26a	Flag Prairie	32	16S	36E	4750
18E18	Lake Creek	10	16S	33½E	5120
18E22a	Logan Valley	13	16S	33½E	5100
18F1	Rock Spring	23	18S	32E	5100
18F4MP	Stinking Water	33	21S	34E	4800

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS (2)

Burnt River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E14	Barney Creek	16	14S	36E	5950
18E13M	Blue Mountain Summit	6	12S	36E	5098
17E1M	Dooley Mountain	32	11S	40E	5430
18E20	Eldorado Pass	20	14S	38E	4600
18E8	Gold Center	21	9S	36E	5340
18E9	Tipton	34	10S	35½E	5100

Powder River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E1	Anthony Lake	18	7S	37E	7125
18E5	Bourne	33	8S	37E	5800
17E1M	Dooley Mountain	32	11S	40E	5430
18E3	Eilertson Meadows	18	8S	38E	5400
18E8	Gold Center	21	9S	36E	5340
18E6	Goodrich Lake	4	9S	38E	6775
17D12m	Ladd Summit	5	5S	39E	3730
18E23	Little Alps	10	7S	37E	6200
18D10	Summit Springs	9	6S	37E	6000
17D7	Taylor Green	3	6S	42E	5740

Pine Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
17D8	Schneider Meadows	35	6S	45E	5400

Grande Ronde River

Number	Name	Sec.	Twp.	Rge.	Elev.
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2P	Aneroid Lake No. 2	16	4S	45E	7300
18E1	Anthony Lake	18	7S	37E	7125
17D10a	Bald Mountain	14	4S	41E	6700
18D9	Beaver Reservoir	8	5S	37E	5340
18D8	County Line	28	4S	34E	4800
18D6	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
17D13a	Mirror Lake	34	4S	44E	8200
17D6M	Moss Spring	28	3S	41E	5850
18D7	Schoolmarm	28	4S	34E	4775
17D11a	Standley	28	2S	42E	7400
17D7	Taylor Green	3	6S	42E	5740
18D3M	Tollgate	31	4N	38E	5070
17D15a	TV Ridge	11	2S	43E	5670

Imnaha River

Number	Name	Sec.	Twp.	Rge.	Elev.
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2P	Aneroid Lake No. 2	16	4S	45E	7000
17D14a	Big Sheep	33	4S	46E	6200

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

Umatilla River

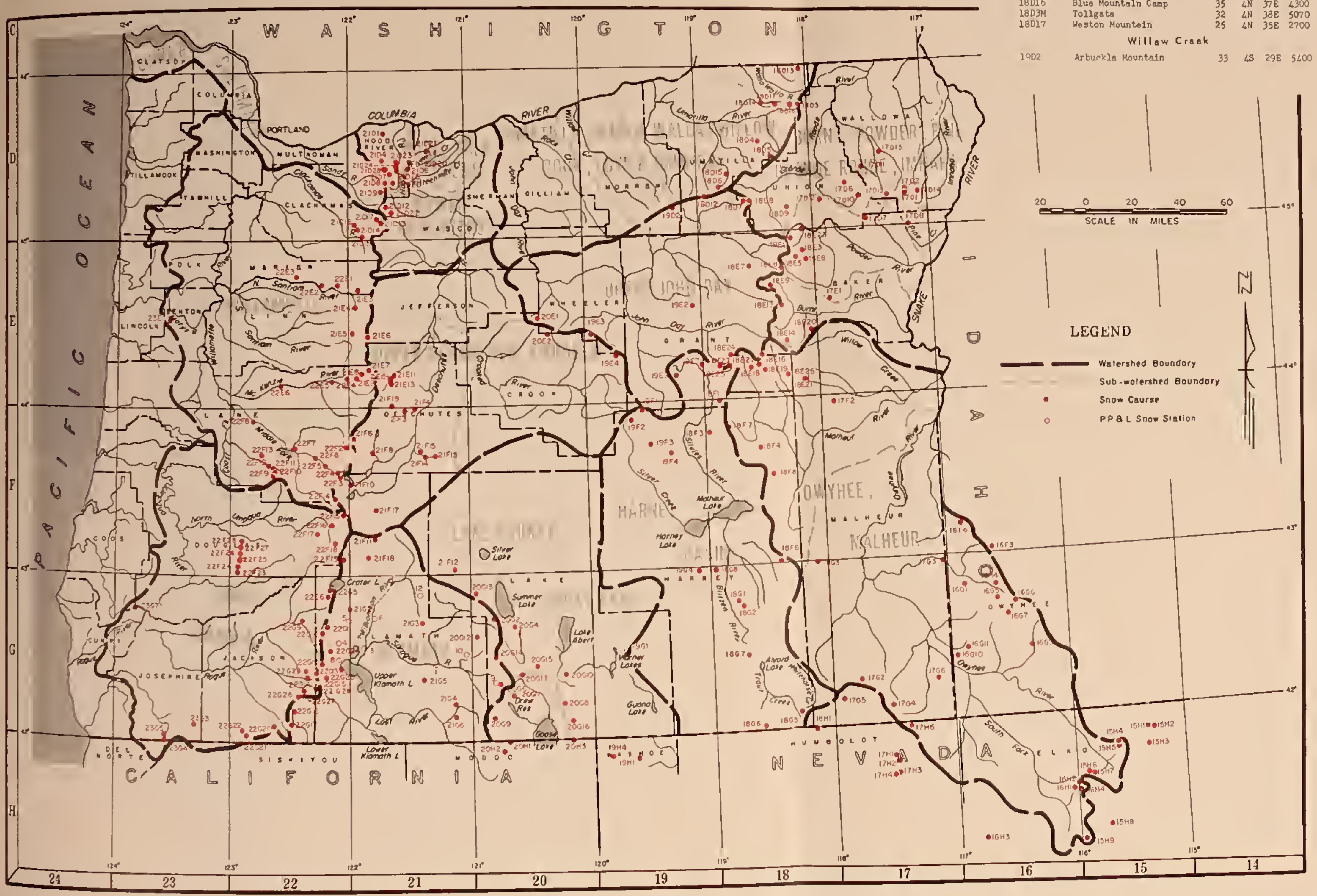
Number	Name	Sec.	Twp.	Rge.	Elev.
19D2	Arbuckle Mountain	33	4S	29E	5400
18D14m	Athena-Weston Summit	21	4N	35E	1700
18D12M	Battle Mountain Summit	29	3S	31E	4340
18D4M	Emigrant Springs	29	1N	35E	3925
18D6	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
18D3M	Tollgate	32	4N	38E	5070
18D13	Walla Walla Diversion	22	6N	38E	2400

Walla Walla River

Number	Name	Sec.	Twp.	Rge.	Elev.
18D16	Blue Mountain Camp	35	4N	37E	4300
18D3M	Tollgate	32	4N	38E	5070
18D17	Weston Mountain	25	4N	35E	2700

Willow Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
19D2	Arbuckle Mountain	33	4S	29E	5400



UPPER JOHN DAY WATERSHEDS (4)

Upper John Day River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E1	Anthony Lake	18	7S	37E	7125
19D2	Arbuckle Mountain	33	4S	29E	5400
18D12M	Battle Mountain Summit	29	3S	31E	4340
19E2M	Beech Creek Summit	4	12S	30E	4800
18E16MP	Blue Mountain Spring	21	15S	35E	5900
18E13M	Blue Mountain Summit	6	12S	36E	5098
19E3MP	Derr	14	13S	23E	5670
18E27a	East Fork Canyon	15	15S	32E	5700
18E8	Gold Center	21	9S	36E	5340
18E24a	Indian Cr. Butte	5	15S	33E	6550
19E9P	Izee Summit	28	16S	29E	5293
18D6	Lucky Strike	28	3S	32E	5050
20E1MP	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
18E7	Olive Lake	14	9S	34E	6000
18D7	Schoolmarm	28	4S	34E	4775
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18E9	Tipton	34	10S	35½E	5100
18E25MP	Williams Ranch	20	15S	32E	4500

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

Upper Deschutes River

Number	Name	Sec.	Twp.	Rge.	Elev.
21E11	Black Pine Spring	14	16S	9E	4600
21F8	Caldwell Ranch	30	21S	8E	4400
22F3	Cascade Summit	7	23S	6E	4880
21F7	Charlton Lake	23	21S	6E	5750
21F11	Chemult	21	27S	8E	4760
21F14	Fire Road	36	21S	11E	5050
21E6	Hogg Pass	24	13S	7½E	4755
21F4	Hungry Flat	30	18S	11E	4400
21F6	Irish-Taylor	25	20S	6E	5500
21F17	Howich	29	25S	25E	4700
21F10	New Crescent Lake	11	24S	6E	4800
21F19	New Dutchman Flat #2	21	18S	9E	6400
21F13	Paulina Lake	34	21S	12E	6330
21F15	Paulina Prairie	28	21S	11E	4285
21F3	Tangent	28	18S	10E	5400
21E15	Three Creeks Butte	27	16S	9E	5200
21E13	Three Creek Meadows	34	16S	9E	5650
22F2	Waldo Lake	15	21S	6E	5500
22F14	Willamette Pass	33	24S	5½E	5600
22F15	Windigo Pass	20	25S	6E	5800

Crooked River

Number	Name	Sec.	Twp.	Rge.	Elev.
19E3MP	Derr	14	13S	23E	5670
20E1MP	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
19F1M	Snow Mountain	1	19S	26E	6300
19E4	Tamarack	8	15S	25E	4800

HOOD, MILE CREEKS LOWER DESCHUTES WATERSHEDS (6)

Hood River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D5	Brooks Meadows	2	2S	10E	4300
21D25M	Cooper Spur	6	2S	10E	3490
21D1	Greenpoint Reservoir	28	2N	9E	3400
21D20	Knebal Springs	31	1S	11E	3850
21D23	Parkdale	6	1S	10E	1770
21D8	Phlox Point	6	3S	9E	5600
21D4	Red Hill	20	1S	9E	4400
21D9	Still Creek	25	3S	8½E	3700
21D7	Tilly Jane	15	2S	9E	6000
21D21	Ulrich Ranch Junction	28	1S	11E	3350
21D3D	Umbrella Falls	3	3S	9E	5400
21D24	Upper Valley	20	1S	10E	2530
21D28	Switchback	28	1S	9E	3255

Mile Creeks - Mosier Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
21D6	Brooks Meadows	2	2S	10E	4300
21D20	Knebal Springs	31	1S	11E	3850
21D21	Ulrich Ranch Junction	28	1S	11E	3350

Lower Deschutes River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D12	Clear Lake	29	4S	9E	3500
21D22	Clear Lake Experimental	29	4S	9E	3500
21E6	Hogg Pass	24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

Sandy River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D8	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700

WILLAMETTE WATERSHEDS (8)

Clackamas River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D15	Big Bottom	25	6S	7E	2118
21D13	Clackamas Lake	35	5S	8½E	3400
21D12	Clear Lake	29	4S	9E	3500
21D16	Lake Harriet	4	6S	7E	2045
21D14	Peavine Ridge	14 & 15	6S	7E	3500
21D8	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700
21D17	Timothy Lake	26	5S	8E	3295

Santiam River

Number	Name	Sec.	Twp.	Rge.	Elev.
22E1	Detroit (town)	1	10S	5E	1610
22E2	Detroit Dam	7	10S	5E	1580
21E6	Hogg Pass	24	13S	7½E	4755
21E4	Marion Forks	25	11S	7E	2730
22E3	Mill City	29	9S	3E	826
21E5	Santiam Junction	14	13S	7E	3990
21E3	Whitewater Bridge	28	10S	7E	2175

McKenzie River

Number	Name	Sec.	Twp.	Rge.	Elev.
21E8	Dead Horse Grade	13	16S	7E	3800
22E4	Lost Creek Ranch	24	16S	6E	1956
21E7	McKenzie	35	15S	7½E	4800
22E5	McKenzie Bridge	13	16S	5E	1372
22E6	Vida	28	16S	2E	800
21E9	White Branch Slide	15	16S	7E	2800

Middle Fork Willamette River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F3	Cascade Summit	7	23S	6E	4880
22F6	McCredie Springs	26	21S	4E	2120
22F8	Meridian Dam	13	19S	1W	750
22F7	Oakridge	16	21S	3E	1310
22F5	Railroad Overpass	27	22S	5E	2750
22F4	Salt Creek Falls	33	22S	6E	4000
22F2	Waldo Lake	15	21S	6E	5500
22F14	Willamette Pass	33	24S	5½E	5600

Coast Fork Willamette River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F9	Champion	12	23S	1E	4500
22F10	Golden Curry Creek	1	23S	1E	3136
22F13	Layng Creek R. S.	31	21S	1E	1200
22F12	Lund Park	22	22S	1E	1740
22F11	Weaver Creek	35	22S	1E	2440

Mary's River

Number	Name	Sec.	Twp.	Rge.	Elev.
23E1	Mary's Peak	21	12S	7W	3520

ROGUE, UMPQUA WATERSHEDS (9)

Rogue River

Number	Name	Sec.	Twp.	Rge.	Elev.
23G4	Althouse	17	41S	7W	4530
22G6	Annie Spring	19	31S	6E	6018
22G28	Beaver Dam Creek	1	38S	4E	5100
22G21	Big Red Mountain	31	40S	1W	6500
22G13	Billie Creek Divide	30	36S	5E	5300
22G27	Deadwood Junction	8	38S	4E	4600
22F19	Diamond-Crater Summit	34	28S	6E	5800
22G14	Fish Lake	3	37S	4E	4865
22G12	Fourmile Lake	9	36S	5E	6000
23G3	Grayback Peak	9	40S	5W	6000
22G17	Hobart Lake	17	40S	3E	5010
22G26	Howard Prairie	32	38S	4E	4500
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G22	Little Red Mountain	25	40S	2W	6500
23G5	Page Mountain	8	41S	7W	4045
22G5	Park Headquarters	8	31S	6E	6450
22G29	Rye Spring Spur	33	36S	4E	5000
22G10	Seven Lakes No. 1	3	34S	5E	6800
22G11	Seven Lakes No. 2	26	33S	5E	6200
22G2	Silver Burn	30	30S	4E	3720
22G20	Siskiyou Summit	17	40S	2E	4630
22G9	South Fork Canal	12	33S	3E	3500
22G1	Whaleback	3	31S	2E	5140

Umpqua River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F9	Champion	12	23S	1E	4500
22F18	Diamond Lake	29	27S	6E	5315
23G7	Eden Valley Summit	10	32S	10W	2390
22F16	North Umpqua	19	26S	6E	4215
22F23	Red Butte No. 1	36	27S	2W	4560
22F24	Red Butte No. 2	30	27S	1W	4000
22F25	Red Butte No. 3	30	27S	1W	3500
22F26	Red Butte No. 4	36	27S	1W	3000
22F27	Red Butte No. 5	20	27S	1W	2500
22F28	Red Butte No. 6	17	27S	1W	2000
22F17	Trap Creek	1	27S	4E	3800
22G1	Whaleback	3	31S	2E	5140
22F15	Windigo Pass	20	25S	6E	5800

KLAMATH WATERSHEDS (10)

Klamath River

Number	Name	Sec.	Twp.	Rge.	Elev.
22G6	Annie Spring	19	31S	6E	6018
22G13	Billie Creek Divide	30	36S	5E	5300
21G5	Bly Mountain	15 & 22	37S	11E	5090
21F11	Chemult	21	27S	8E	4760
22G24	Gold Springs Camp	12	35S	5E	6100
20G12a	Crazyman Flat	9	34S	15E	6100
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
22F19	Diamond-Crater Summit	34	28S	6E	5800
21F18	Diamond Lake Jct. (97)	1	29S	7E	4600
21G6a	Dog Hollow	1	40S	14E	4900
20G14a	Finley Corrals	11	36S	16E	6000
22G12	Fourmile Lake	9	36S	5E	6000
21G4	Gerber	12	39S	13E	4850
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G26	Howard Prairie	32	38S	4E	4500
22G15	Lake of the Woods	11	37S	5E	4960
22G5	Park Headquarters	8	31S	6E	6450
22G25	Pelican Guard Station	9	36S	6E	4150
20G6MP	Quartz Mountain	2	36S	16E	5320
22G10	Seven Lakes No. 1	3	34S	5E	6800
22G11	Seven Lakes No. 2	26	33S	5E	6200
20H1a	State Line (Cal)	21	48N	11E	5750
20G9AP	Strawberry	4	40S	16E	5760
20G2AP	Summer Rim	15	33S	16E	7200
21G2	Sun Mountain	22	32S	7½E	5350
20G13a	Sycan Flat	25	31S	14E	5500
21G3	Taylor Butte	16	33S	11E	5100

Pacific Power and Light Company's Snow Stations

Number	Name	Sec.	Twp.	Rge.	Elev.
1	Beatty (PP&L)	22	36S	12E	4300
10	Ely 101 Ranch (PP&L)	22	35S	14E	4800
3	Chiloquin (PP&L)	34	34S	7E	4187
4	Crystal (PP&L)	26	34S	6E	4200
5	Fort Klamath (PP&L)	22	33S	7½E	4150
6	Kirk (PP&L)	1	33S	7E	4533
9	Quartz Mountain (PP&L)	33	37S	16E	5504
8	Harriman Lodge (PP&L)	3	36S	6E	4200
12	Yamsey (PP&L)	20	31S	11E	4600

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

Goose Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G8MP	Camas Creek	5	39S	21E	5720
20G11a	Cox Flat	16	37S	18E	5750
20G16a	Crane Mountain	13	40S	21E	6020
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
20H3a	Dismal Swamp (Cal)	31	48N	16E	7000
20G17a	Patton Meadow	28	38S	18E	6800
20G6MP	Quartz Mountain	2	38S	16E	5320
20H1a	State Line (Cal)	21	48N	11E	5750
20G9AP	Strawberry	4	40S	16E	5600

Abert Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G11a	Cox Flat	16	37S	18E	5750
20G14a	Finley Corrals	11	36S	16E	6000
20G4	Mill Creek	1	34S	17E	6200
20G6MP	Quartz Mountain	2	38S	16E	5320
20G10a	Sherman Valley	15	37S	21E	6600

Summer Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G2AP	Summer Rim	15	33S	16E	7200

Silver Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
21F12P	Silver Creek	25 & 26	29S	13E	4900
20G13a	Sycan Flat	25	31S	14E	5500

Warner Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G8MP	Camas Creek	5	39S	21E	5720
20G16a	Crane Mountain	13	40S	21E	6020
20H3a	Dismal Swamp (Cal)	31	48N	22E	7000
19G1a	Hart Mountain	1	36S	25E	6350
20G10a	Sherman Valley	15	37S	21E	6600

Guano Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
19H1	Bald Mountain (Nev)	17	45N	21E	6720
19G1a	Hart Mountain	1	36S	25E	6350
19H4a	Little Bally Mt. (Nev)	8	45N	19E	6600

HARNEY BASIN WATERSHED (12)

Silvies River - Silver Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
18F7a	Call Meadows	29	20S	33E	5340
19F2	Delintment Lake	28	19S	26E	5600
19F3	Emigrant Butte	14	21S	27E	5000
18F3P	Idlewild Camp	27	20S	31E	5200
19E9P	Izee Summit	28	16S	29E	5293
18F1	Rock Spring	23	18S	32E	5100
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18F4MP	Stinking Water	33	21S	34E	4800
19F4m	Willow-Bald	19	22S	29E	5000

Donner Und Blitzen River

Number	Name	Sec.	Twp.	Rge.	Elev.
18F6a	Buck Pasture	21	29S	35E	5700
18G2MA	Fish Creek	4	33S	33E	7900
19G1a	Hart Mountain	1	36S	25E	6350
18G1MA	Silvies	35	32S	32½E	6900
18G7a	"V" Lake	31	35½S	32½E	6600

Trout and Whitehorse Creeks

Number	Name	Sec.	Twp.	Rge.	Elev.
18G6a	Denio Creek	14	45S	34E	6000
18H1	Disaster Peak (Nev)	8	47N	34E	6500
17G5a	Oregon Canyon	9	40S	40E	6950
18G5a	Trout Creek	10	41S	38E	7800

Harney Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
18G8	Buckskin Lake	2	30S	30E	5200
19G4	Foster Flat	15	30S	29E	5020

LEGEND

19D2	Snow course only
19D2M	Snow course and soil moisture
19D2MA	Snow course, soil moisture and aerial marker
19D2A	Snow course and aerial marker
19D2N	Soil moisture only
19D2a	Aerial marker only
19D2P	Snow course and precipitation gage

Map and Index to OREGON SNOW COURSES

7-S-19101-0

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE M-1874

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY
- Douglas County Water Resources Survey

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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